AIWA-04170

aiwa

COMPACT DISC STEREO SYSTEM

XH-A1000

OPERATING INSTRUCTIONS

8A-MTM-905-01
991215AKY-Y-M

K

R·D·S EON

COMPACT disc DIGITAL AUDIO

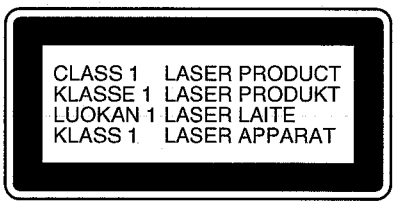
WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This compact disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the exterior.



CAUTION!

Invisible laser radiation when open and inter locks defeated. Avoid exposure to beam.

WARNING

FOR USE IN THE UNITED KINGDOM
This appliance is supplied with a fitted three pin mains plug. A 5 amp fuse is fitted in the plug.
Should the fuse need to be replaced, use a 5 amp fuse approved by ASTA or BSI to BS1362. When replacing the fuse, you must ensure that any removable fuse covers are correctly refitted.
If you should lose the fuse cover, please contact your nearest AIWA dealer.

DO NOT CUT OFF THE PLUG FROM THIS APPLIANCE. If the plug fitted is not suitable for the power points in your home, or the cable is too short to reach a power point, obtain an appropriate safety approved extension lead or adaptor. If in any doubt please consult a qualified electrician.

If the plug is cut off, remove the fuse and dispose of the plug immediately. **THERE IS DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.**

If a new plug is to be fitted please ensure it contains a 5 amp fuse, otherwise the circuit should be protected by a 5 amp fuse at the distribution board.

IMPORTANT
The wires in the mains lead are coloured in accordance with the following code:

BLUE — NEUTRAL
BROWN — LIVE

As the colours of the wires in the mains lead of this appliance may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked by the letter N or coloured BLACK.

The wire which coloured BROWN must be connected to the terminal which is marked by the letter L or coloured RED.

DO NOT connect either the BLUE or BROWN wires in the mains lead to the earth terminal (marked with the letter E or by the earth symbol ⏚ or coloured GREEN or GREEN/YELLOW) of a three pin plug.

PRECAUTIONS

Read the Operating Instructions carefully and completely before operating the unit. Be sure to keep the Operating Instructions for future reference. All warnings and cautions in the Operating Instructions and on the unit should be strictly followed, as well as the safety suggestions below.

Installation

1 **Water and moisture** — Do not use this unit near water, such as near a bathtub, washbowl, swimming pool, or the like.
2 **Heat** — Do not use this unit near sources of heat, including heating vents, stoves, or other appliances that generate heat. It also should not be placed in temperatures less than 5°C (41°F) or greater than 35°C (95°F).
3 **Mounting surface** — Place the unit on a flat, even surface.
4 **Ventilation** — The unit should be situated with adequate space around it so that proper heat ventilation is assured. Allow 10 cm clearance from the rear and the top of the unit, and 5 cm from the each side.
   - Do not place the unit on a bed, rug, or similar surface that may block the ventilation openings.
   - Do not install the unit in a bookcase, cabinet, or airtight rack where ventilation may be impeded.
5 **Objects and liquid entry** — Take care that objects or liquid do not get inside the unit through the ventilation openings.
6 **Carts and stands** — When placed or mounted on a stand or cart, the unit should be moved with care.
   Quick stops, excessive force, and uneven surfaces may cause the unit or cart to overturn or fall.
7 **Condensation** — Moisture may form on the CD pickup lens when:
   - The unit is moved from a cold spot to a warm spot
   - The heating system has just been turned on
   - The unit is used in a very humid room
   - The unit is cooled by an air conditioner

   When this unit has condensation inside, it may not function normally. Should this occur, leave the unit for a few hours, then try to operate again.
8 **Wall or ceiling mounting** — The unit should not be mounted on a wall or ceiling, unless specified in the Operating Instructions.

Electric Power

1 **Power sources** — Connect this unit only to power sources specified in the Operating Instructions, and as marked on the unit.

2 **AC power cord**
- When disconnecting the AC power cord, pull it out by the AC power plug. Do not pull the cord itself.
- Never handle the AC power plug with wet hands, as this could result in fire or shock.
- Power cords should be firmly secured to avoid being severely bent, pinched, or walked upon. Pay particular attention to the cord from the unit to the AC power socket.
- Avoid overloading AC power sockets and extension cords beyond their capacity, as this could result in fire or shock.

3 **When not in use** — Unplug the AC power plug from the AC power socket if the unit will not be used for several months or more. When the cord is plugged in, a small amount of current continues to flow to the unit, even when the power is turned off.

Maintenance

Clean the unit only as recommended in the Operating Instructions.

Damage Requiring Service

Have the units serviced by a qualified service technician if:
- The AC power cord or plug has been damaged
- Foreign objects or liquid have got inside the unit
- The unit has been exposed to rain or water
- The unit does not seem to operate normally
- The unit exhibits a marked change in performance
- The unit has been dropped, or the cabinet has been damaged

DO NOT ATTEMPT TO SERVICE THE UNIT YOURSELF.

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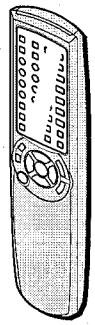
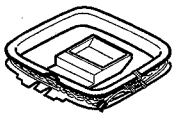
CHECK YOUR SYSTEM AND ACCESSORIES

XH-A1000

CX-A1000 Compact disc stereo cassette receiver
SX-WA1000 Front speakers
SX-C1800 Centre speaker
SX-R1800 Surround speakers



Remote control



MW/LW antenna

FM antenna

Operating Instructions, etc.

BASIC CONNECTIONS

The DOLBY PRO LOGIC system which is the biggest feature of this stereo system provides you with multichannel sound in your home. Enjoy the enriched home theatre system by connecting the TV set or video equipment with this unit.
Complete setting and connection of the main unit, supplied speakers, your TV and video equipment according to the following procedure.

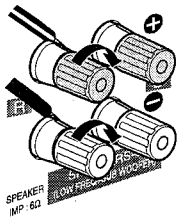
Before connecting the AC cord
The rated voltage of your unit shown on the rear panel is 230V AC. Check that the rated voltage matches your local voltage.

IMPORTANT
Connect the speakers, antennas, and all optional equipment first. Then connect the AC cord.

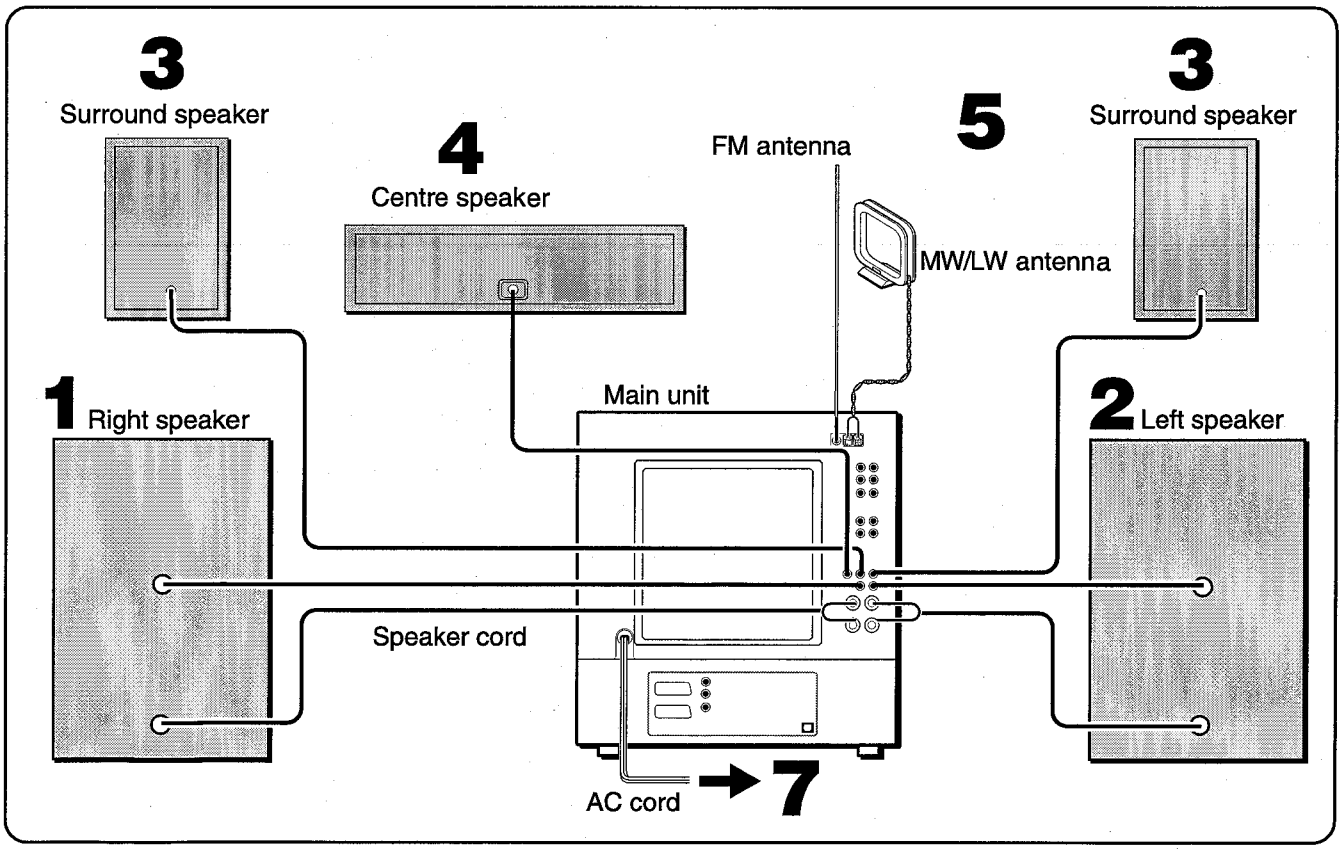
There is no difference between the front speakers as well as the surround speakers. Both speakers of its kind can be connected as L (left) or R (right).

1 Connect the right speaker to the main unit.

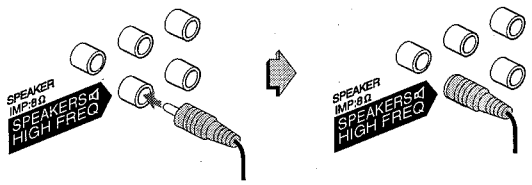
① Connect the speaker cord with the white stripe to the **SPEAKERS LOW FREQ R ⊕** jack and the black cord to the **⊖** jack.



Wind the tip of the cord around the jack. Then tighten the jack. Check that the cord is connected securely.



② Connect the blue coloured speaker cord to **SPEAKERS HIGH FREQ R** jack.

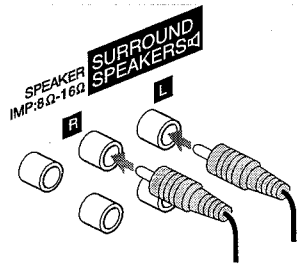


2 Connect the left speaker to the main unit.

Connect the blue coloured speaker cord to **SPEAKERS HIGH FREQ L** jack, and another speaker cord to the **SPEAKERS LOW FREQ L** jacks in the same manner as step 1.

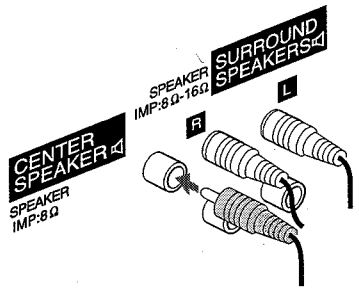
3 Connect the surround speakers to the main unit.

Connect the right surround speaker cord to **SURROUND SPEAKERS R** jack, and the left to **SURROUND SPEAKERS L** jack.



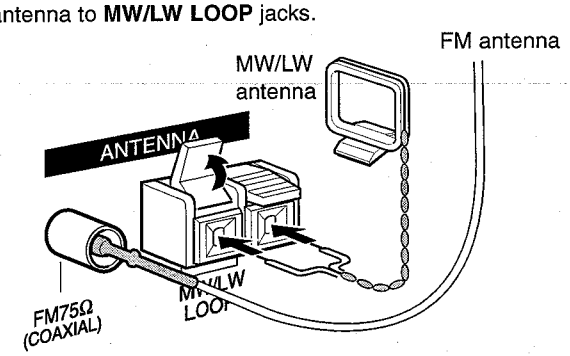
4 Connect the centre speaker.

Connect the centre speaker cord to **CENTER SPEAKER** jack.



5 Connect the supplied antennas.

Connect the FM antenna to **FM 75 Ω** jack and the MW/LW antenna to **MW/LW LOOP** jacks.



6 Connect other equipment.

Some audio and video equipment(LD player, MD player, DVD player, TV, etc.) can be connected to this unit.
See page 6 for details.

7 Connect the AC cord to an AC power socket.

The DEMO (Demonstration) will begin when the AC cord is plugged into an AC power socket for the first time after purchase. To deactivate the DEMO, set the clock.

To position the antennas

FM antenna:

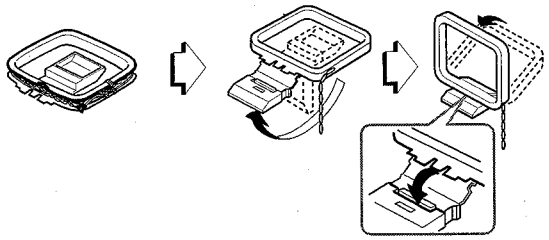
Extend fully and position for the best possible reception.
The use of an outdoor antenna is recommended for better reception.

MW/LW antenna:

Position and rotate this antenna to find the best reception.

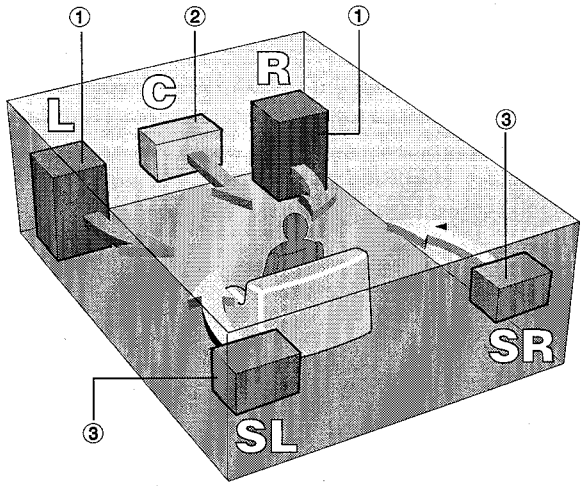
To stand the MW/LW antenna on a surface

Fix the claw to the slot.



POSITIONING THE SPEAKERS

To achieve the optimum effects obtainable with the DOLBY PRO LOGIC system, it is important to position the speakers properly. Refer to the following illustration to find out the best location in your room.



① Front speakers

② Centre speaker

Position in the centre of the two front speakers. In addition, position on or below the TV set, if connecting a TV set to the unit.

③ Surround speakers

Place the surround speakers directly to the side of or slightly behind the listening area. Align them horizontally, about 1 meter above ear height.

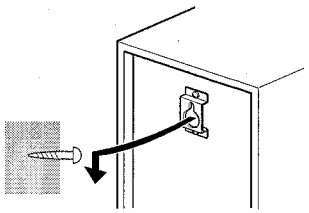
NOTE

- No sound is heard from the centre and surround speakers when the DOLBY PRO LOGIC, the DSP SURROUND system and the 5.1CH (page 27) are set to off.
- The sound is heard from the centre speaker when the DOLBY PRO LOGIC or the 5.1CH (page 27) is set to on.

To mount the surround speakers on a wall

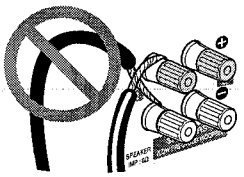
Use wall mounting screws (not supplied).

Select a spot that will hold the weight of the speakers and carefully mount the surround speakers so that they are firmly secured.



Aiwa disclaims any responsibility for injury to persons or other accidents caused by not fitting the surround speakers properly or if the place of the installation is not suitable.

NOTE

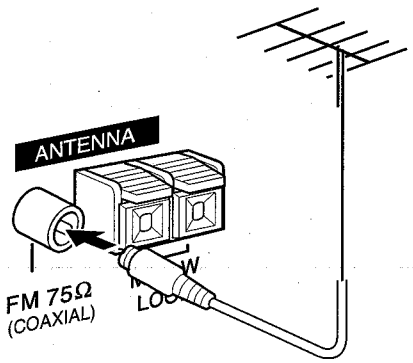


- Be sure to connect the speaker cords correctly. Contact of bare conductor with other jacks or other conductors may cause short circuits in **SPEAKERS** jacks or malfunctions.
- Do not leave objects generating magnetism, such as credit cards, near the speakers, as the objects may be damaged.
- Do not bring the FM antenna near metal objects or curtain rails.
- Do not bring the MW/LW antenna near other optional equipment, the stereo system itself, the AC cord or speaker cords, since noise will be picked up.
- Do not unwind the MW/LW antenna wire.

CONNECTING AN OUTDOOR ANTENNA

For better FM reception, use of an outdoor antenna is recommended.

Connect the outdoor antenna to **FM 75** Ω jacks.



CONNECTING OTHER EQUIPMENT

Video equipment, a TV set, an LD player, a DVD player or an MD player, etc. can be connected to this unit.

NOTE

When you connect any equipment to this unit, be sure to turn off the power and unplug both units from the wall outlet before making any connections.

AV 1/AV 2 jacks

Video equipment, a DVD player, LD player or a cable TV, etc. can be connected to these jacks.

- Use the supplied 21-pin scart cable.

NOTE

- This unit is not designed to connect some equipment in a row with the 21-pin scart cable. If you connect them in this way, the automatic switching function does not work when the power is turned on or off in the connected equipment.
- The 21-pin scart connector of this unit does not correspond to the RGB video signals.
- A TV set equipped with the 21-pin scart connector should only be connected to the AV 1/AV 2 jacks of this unit.

VIDEO3 jacks

A video equipment, a camcorder or a TV game, etc. can be connected to these jacks.

- Use the audio cable and video cable commercially available.
- Connect the L (left) output of the connected equipment to **AUDIO IN L** of this unit, connect the R (right) output and **AUDIO IN R** by using the audio cable.
- Connect the Video output of the connected equipment and **VIDEO IN** of this unit by using the video cable.

NOTE

Turn **VOLUME** to "0" before connecting any equipment to VIDEO 3 jacks to avoid generating noise.

REC OUT/AUDIO MONITOR jacks

Recording equipment (such as an MD recorder, a CD-R/RW recorder or a cassette deck) or a TV set, etc. can be connected to these jacks.

The sounds from the equipment connected to **AV 1** or **AV 2** can be recorded or monitored as well.

- Use the supplied 21-pin scart cable.

MONITOR/VIDEO OUT jacks

The TV set, etc. can be connected to these jacks.

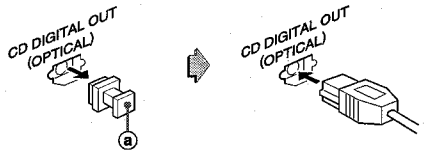
The videos from the equipment connected to **AV 1** or **AV 2** can be monitored.

- Use the supplied 21-pin scart cable.

CD DIGITAL OUT (OPTICAL) jack

Digital equipment such as an MD recorder, a DAT deck, a digital cassette deck or a digital amplifier, etc. can be connected to this jack. The digital signals from the CD player of this unit are output to the connected equipment.

- Use the optical cable commercially available.
- Before connecting an optical cable remove the dust cap ⓐ from **CD DIGITAL OUT (OPTICAL)** jack.



- When **CD DIGITAL OUT (OPTICAL)** jack is not used, re-attach the dust cup ⓐ.

PHONO IN jacks

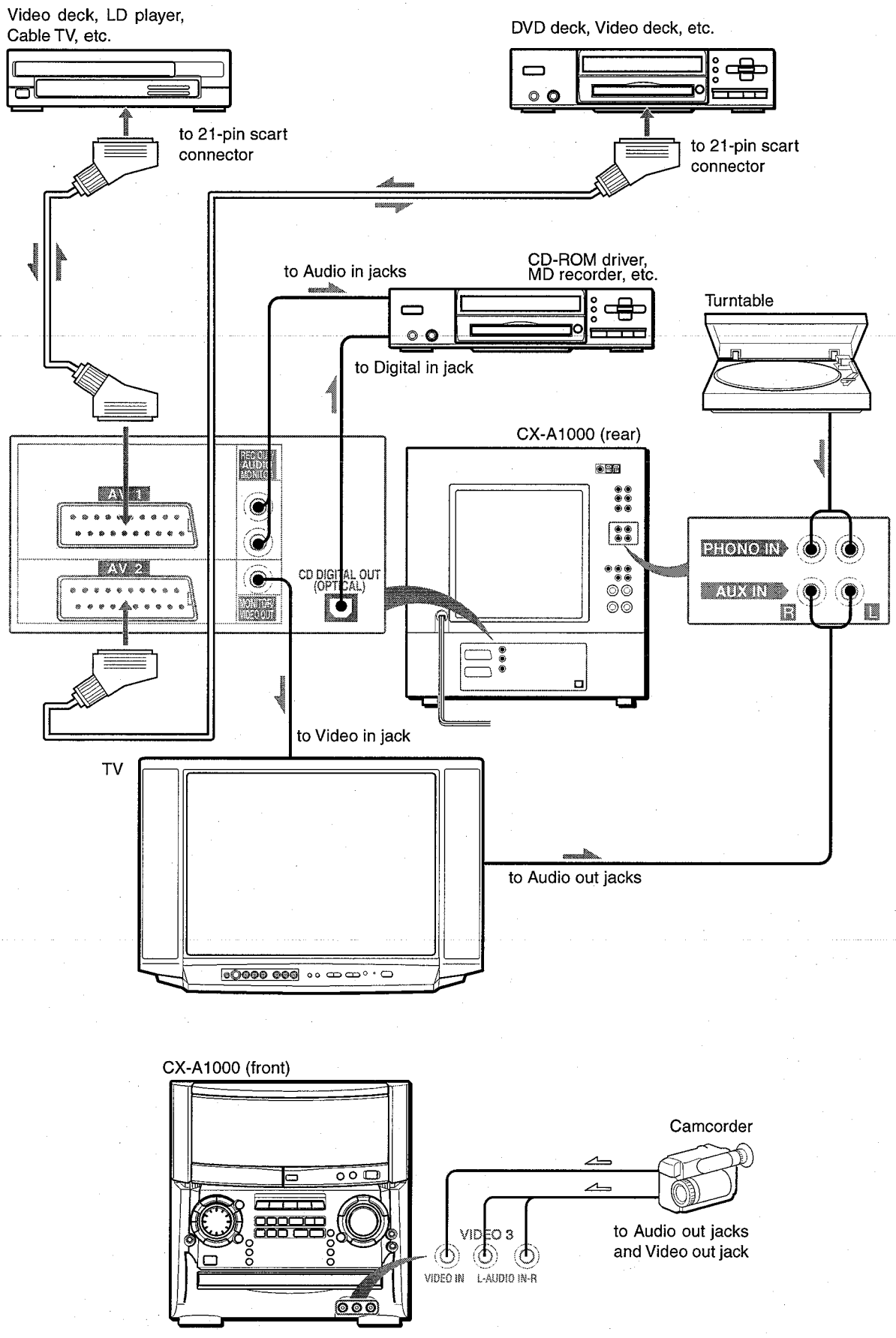
A turntable can be connected to these jacks. Use an Aiwa turntable equipped with a built-in equalizer amplifier.

AUX IN jacks

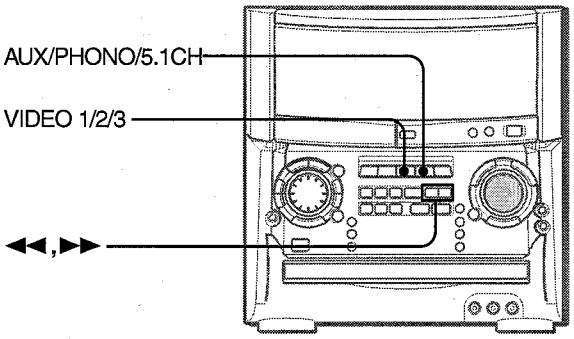
Playback equipment such as a TV set or an MD player, etc. can be connected to these jacks.

- Use the audio cable and video cable commercially available.
- Connect L (left) output of the connected equipment to **AUDIO L** of this unit, connect the R (right) output and **AUDIO R** by using the audio cable.

Connection example



SELECTING EXTERNAL AUDIO/VIDEO SOURCES



To play equipment connected to the unit, proceed as follows.

1 Press VIDEO1/2/3 or AUX/PHONO/5.1CH repeatedly to select a desired source.

The source names are displayed cyclically as below.

When VIDEO1/2/3 is pressed

VIDEO1 → VIDEO2 → VIDEO3

When AUX/PHONO/5.1CH is pressed

AUX → 5.1chIN → PHONO

Select one of the sources depending on the equipment connected to the input jacks on the unit.

While the headphones are plugged in, 5.1chIN is not displayed.

- The source name VIDEO 1 on the function button and in the dispay window corresponds to the rear jack AV 1, and VIDEO 2 corresponds to AV 2.

2 Play the connected equipment.

To monitor a video source

The selected video source is indicated on the display and the video signal through **MONITOR/VIDEO OUT** jack is shown on the TV.

To adjust the sound level of equipment connected to the input jacks (except equipment connected to PHONO jacks)

When the sound level of the external source is much higher or much lower than that of other function sources, adjust it as follows.

1 Press **VIDEO1/2/3** or **AUX/PHONO/5.1CH** repeatedly so that the name of the jacks connected with the concerned equipment is displayed.
2 Play the equipment.
3 Press ◄◄ or ►► until the sound level becomes the same as that of other function sources.

NOTE

- During recording, the sound level cannot be adjusted.
- The sound level of the connected turntable cannot be adjusted.

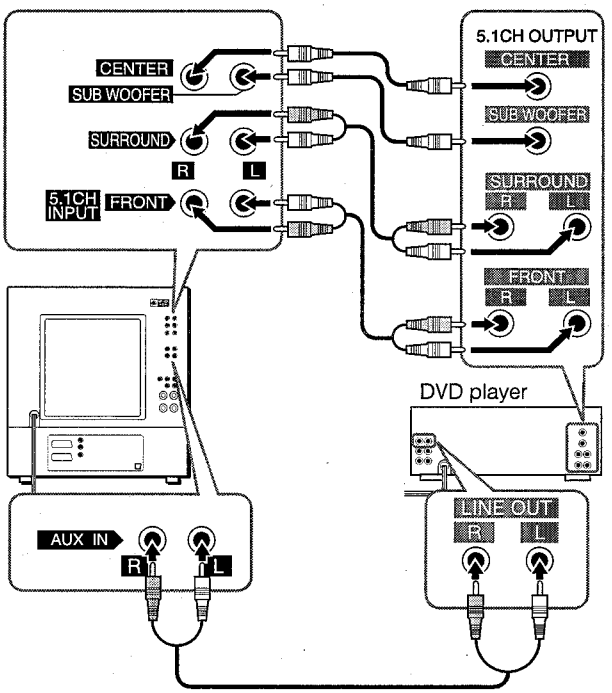
CONNECTING A DVD PLAYER

5.1CH INPUT jacks of this unit support the DOLBY DIGITAL SURROUND system (see page 27).

Connect a DVD player with 5.1ch output jacks to this unit using cables with RCA phono plugs as follows:

This unit's jack	DVD player's jack
5.1CH INPUT FRONT (L, R)	5.1CH OUTPUT FRONT (L, R), etc.
5.1CH INPUT SURROUND (L, R)	5.1CH OUTPUT SURROUND (L, R), etc.
5.1CH INPUT CENTER	5.1CH OUTPUT CENTER, etc.
5.1CH INPUT SUB WOOFER	5.1CH OUTPUT SUB WOOFER, etc.
VIDEO/AUX IN (L, R)	LINE OUT (L, R), etc.

(See **NOTE**.)



NOTE

- If the DVD player is not connected to **AUX IN** jacks:
  - the spectrum analyzer does not show the sound level of the DVD player.
  - the sound from the connected DVD player cannot be recorded.

  To remove these limitations, connect **LINE OUT** jacks of the DVD player to **AUX IN** jacks of this unit in addition to connecting them to **5.1CH INPUT** jacks.

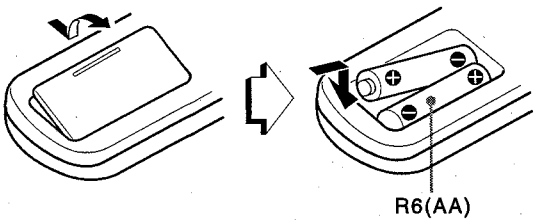
  The signals through **AUX IN** jacks enable the spectrum analyzer to work and the recording to be done.

  Refer also to the operating instructions of the DVD player.
- The DOLBY DIGITAL SURROUND sound cannot be recorded in any way.

REMOTE CONTROL

Inserting batteries

Detach the battery cover on the rear of the remote control and insert two R6 (size AA) batteries.



When to replace the batteries

The maximum operational distance between the remote control and the sensor on the main unit should be approximately 5 metres (16 feet). When this distance decreases, replace the batteries with new ones.

Using the remote control

The instructions in this manual refer mainly to the buttons on the main unit. Buttons on the remote control with the same names as those on the main unit can be used as well.

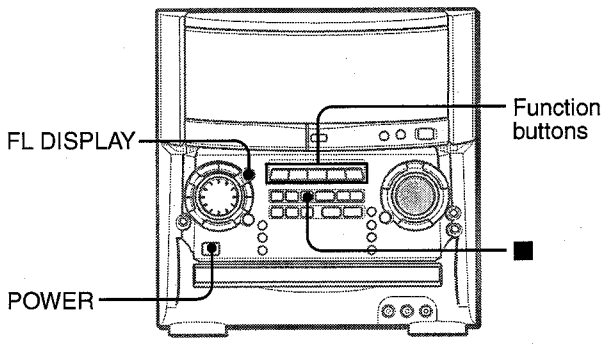
►/◄► PRESET on the remote control

The function is the same as that of ◄► on the main unit.

NOTE

- If the remote control is not going to be used for an extended period of time, remove the batteries to prevent possible electrolyte leakage.
- The remote control may not operate correctly when:
  - The line of sight between the remote control and the remote sensor inside the display window is exposed to intense light, such as direct sunlight
  - Other remote controls are used nearby (those of a television, etc.)

BEFORE OPERATION



To turn the power on

Press one of the function buttons (**TAPE, TUNER/BAND, VIDEO1/2/3, AUX/PHONO/5.1CH** or **CD**).
Playback of the inserted disc or tape begins, or the previously tuned station is received (Direct Play Function).
POWER is also available.

To turn the power off

Press **POWER**.

Illumination guide

Whenever **POWER** or one of the function buttons is pressed, the buttons for the selected operation light up or flash.
Example: When **CLOCK** is pressed, ◄◄, ►► and ▮▮ light as a guide to setting the current time.

Demo mode

When the AC cord is plugged into an AC outlet for the first time after purchase, the Demo mode will begin in the display window.
When the power is turned on, the Demo mode will end. When the power is turned off, the Demo mode will begin again.
Until the clock is set, the Demo mode will begin whenever the power is turned off.
When the clock is set, the Demo mode will not begin even if the power is turned off. (See "SETTING THE CLOCK" on page 31 to set the clock.)

To activate the Demo mode

Press **DEMO** while the power is turned on or off. The Demo mode will begin in the display window.
When one of the button is pressed or the control is turned, the Demo mode will end.

SETTING DISPLAY MODE

By pressing **FL DISPLAY** as follows, the illumination colour, brightness level of the display and the spectrum analyzer display can be changed.

To change the illumination colour

The lighting colour around the function buttons and above the CD compartment can be changed.

1 Press **FL DISPLAY** once so that the current mode is displayed.
2 Within 4 seconds, turn **MULTI JOG** to select the illumination colour. The modes are displayed cyclically as below.
The colour will be automatically set after 4 seconds.

BLUE ⟷ UMBER ⟷ PURPLE

To change the brightness level of the display

1 Press **FL DISPLAY** twice so that the current mode is displayed.
2 Within 4 seconds, turn **MULTI JOG** to select the dimmer mode. The modes are displayed cyclically as below. The mode will be automatically set after 4 seconds.

DIM-OFF ↔ DIMMER 1 ↔ DIMMER 2 ↔ DIMMER 3

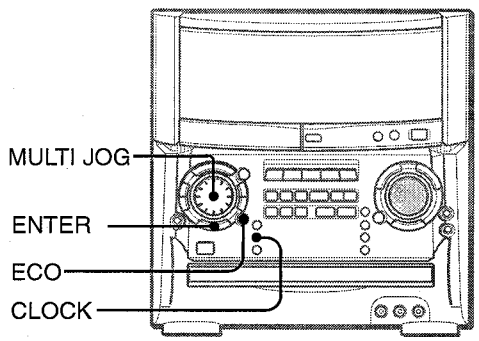
DIM-OFF: The normal display.
DIMMER 1: The illumination of the display is dimmer than usual.
DIMMER 2: The illumination of the display is dimmer than DIMMER 1.
DIMMER 3: The illumination of the display is dimmer than DIMMER 2. The spectrum analyzer and the button lamps turn off.

To change the spectrum analyzer display

1 Press **FL DISPLAY** three times so that the current mode is displayed.
2 Within 4 seconds, turn **MULTI JOG** to select the spectrum analyzer display. The modes are displayed cyclically as below. The mode will be automatically set after 4 seconds.

NORMAL ↔ REVERSE ↔ PEAK

SETTING THE POWER ECONOMIZING MODE



Setting this unit to the power economizing mode reduces power consumption as follows.

ECO ON

- When the power is turned off, all the display lights turn off, and only the indicator on **POWER** lights; however, when the clock is not set, the window turns to the demo display.
- When the power turns on due to timer recording (page 33), the display brightness level is set to "DIMMER 3", all button lamps are off, and the volume is set to the minimum level (0).
- The display brightens only when operating the unit. When the unit has not been used for 10 seconds, the brightness level switches to the dimmer mode previously selected. (If the display brightness level is set to "DIM-OFF", the brightness does not change. When the level is "DIMMER 3", the button lamps are also turned off.)

ECO AUTO

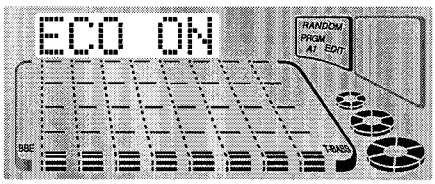
- In addition to the conditions of ECO ON, if a CD or tape does not play for 10 minutes or if there is no audio input from any connected external equipment for 10 minutes when VIDEO1, 2, 3, AUX or PHONO is selected as the source, the power shuts off. Except, the power does not shut off when the 5.1CH is selected.

ECO OFF

The economizing mode does not work.

***1* Press ECO.**

The current power-economizing mode status (ECO OFF/ECO ON/ECO AUTO) will be displayed.



***2* Turn MULTI JOG within 4 seconds to change the power-economizing mode.**

***3* Within 4 seconds, press ENTER to set the selected power-economizing mode.**

Standby power consumption

If the power-economizing mode is OFF: 55 W
If the power-economizing mode is ON or AUTO: 1.9 W

NOTE

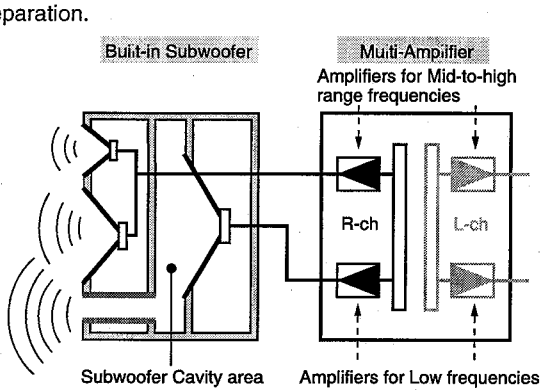
To view the clock when all the display lights turn off, press **CLOCK.** The time is displayed for 4 seconds.

4-CHANNEL MULTI-AMPLIFIER SYSTEM

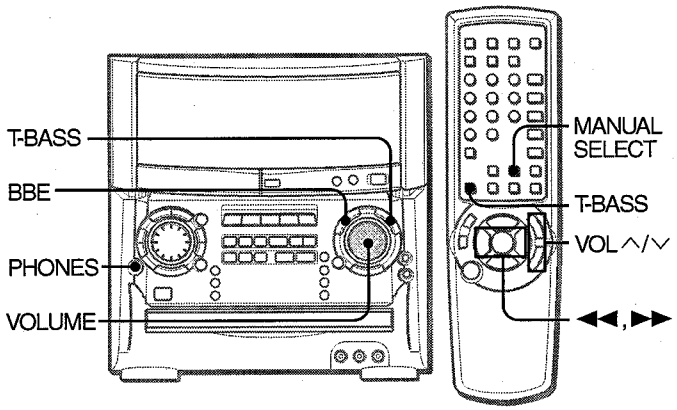
To provide reinforcement for the ultra-low frequencies, in addition to the Left/Right 2-channel amplifier used to reproduce mid-to-high-range frequencies, this system incorporates a second L/R 2-channel amplifier just for reproduction of ultra-low frequencies –making it, in effect, a 4-amplifier system. By utilizing discrete amplifiers for mid to-high-frequencies and low frequencies, high-quality sonic reproduction that is virtually free from distortion can be realized.
This Multi Amplifier System, which utilizes independent circuitry for the different frequency ranges, enables superb sonic reproduction free from distortion.

BUILT-IN SUBWOOFER SYSTEM

The built-in subwoofer system has a separate subwoofer cavity area that is part of the loudspeaker cabinet structure, which acts as a sonic filter to cut distortion components. (In the Multi Amplifier System, the ultra-low frequency signals transmitted from their own independent amplifier are reproduced in this area.) This separate construction gives a clear, rich definition to bass reproduction and it can realize clear, well-defined mid-to-high frequency signals.
AIWA's built-in subwoofer system incorporates a subwoofer capable of powerful, satisfying bass performance with true stereo separation.



AUDIO ADJUSTMENTS



VOLUME CONTROL

Turn VOLUME on the main unit, or press VOL ∧ or ∨ on the remote control.

The volume level is displayed as a number from 0 to MAX (50). The volume level is automatically set to 20 when the power is turned off with the volume level set to 21 or more.

To change the left/right balance

Press **MANUAL SELECT** on the remote control. L/R is displayed for 2 seconds. Press ◄◄ or ►► on the remote control within these 2 seconds.

- The DOLBY PRO LOGIC (page 26) and the DOLBY DIGITAL SURROUND (page 27) front speakers level is also changed.

Using the headphones

Connect headphones to **PHONES** jack with a stereo standard plug (ø6.3 mm).

No sound is output from the speakers while the headphones are plugged in.

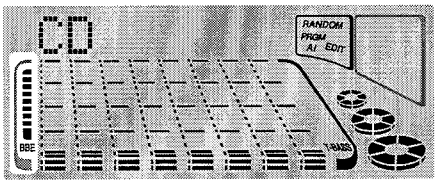
- When the headphones are plugged in, the DSP SURROUND system (page 13), the DOLBY PRO LOGIC (page 26) and the 5.1CH (page 27) do not function.

BBE SYSTEM

The BBE system enhances the clarity of high-frequency sound. It also enriches the Karaoke function to make your voice sound clear and pleasant.

Press BBE.

Each time it is pressed, the level changes. Select one of the three levels or the off position to suit your preference.



NOTE

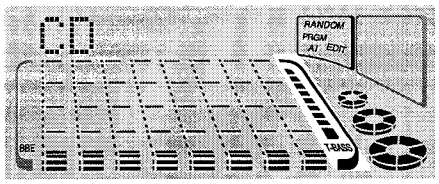
When playing back a tape recorded with BBE, it is recommended that BBE be set to off to avoid distorted high frequency sound.

SUPER T-BASS SYSTEM

The T-BASS system enhances the realism of low-frequency sound.

Press T-BASS.

Each time it is pressed, the level changes. Select one of the three levels or the off position to suit your preference.



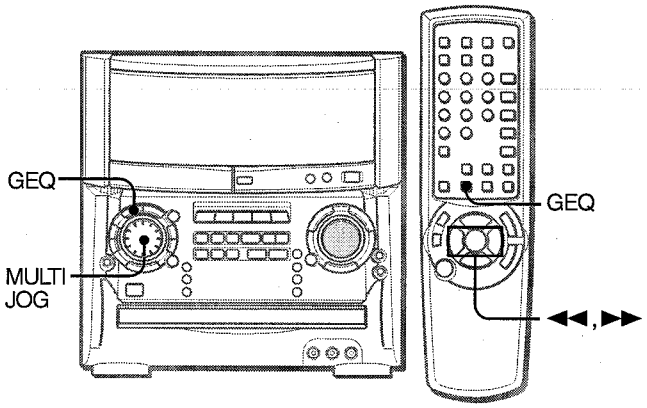
NOTE

Low-frequency sound may be distorted when the T-BASS system is used for a disc or tape in which low-frequency sound is already emphasized. In this case, cancel the T-BASS system.

GRAPHIC EQUALIZER

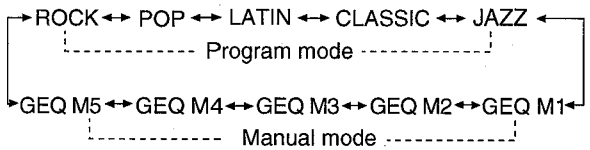
SELECTING THE PROGRAMMED EQUALIZATION CURVE

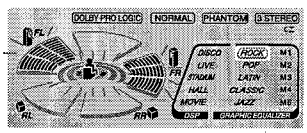
This unit provides the following 5 different equalization curves.
ROCK: Powerful sound emphasizing treble and bass
POP: More presence in the vocals and midrange
LATIN: Accented higher frequencies for latin-type music
CLASSIC: Enriched sound with heavy bass and fine treble
JAZZ: Accented lower frequencies for jazz-type music.

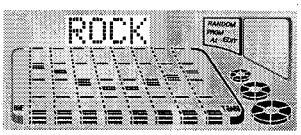


1 **Press GEQ.**
The current mode is displayed.

2 **Within 4 seconds, turn MULTI JOG or press ◄◄ or ►► to select a desired mode. The modes are displayed cyclically as below.**



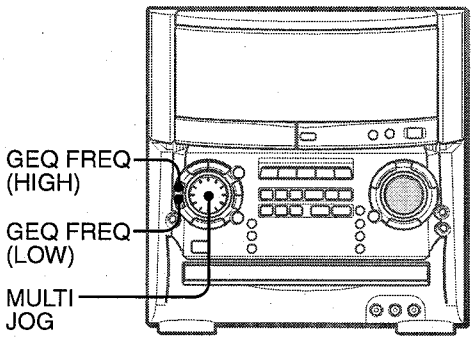




The mode will be automatically set after 4 seconds.

To cancel the selected mode
Press **GEQ** twice so that "GEQ OFF" is displayed.

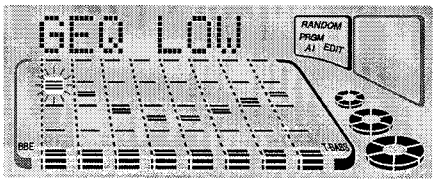
SETTING A NEW EQUALIZATION CURVE MANUALLY



The equalization curve can be customized to suit your preference.

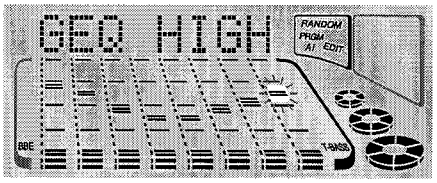
1 **Press GEQ FREQ (LOW).**
The lowest level frequency indicator flashes for 8 seconds.

2 **Within 8 seconds, turn MULTI JOG to adjust the level of the lowest frequency.**



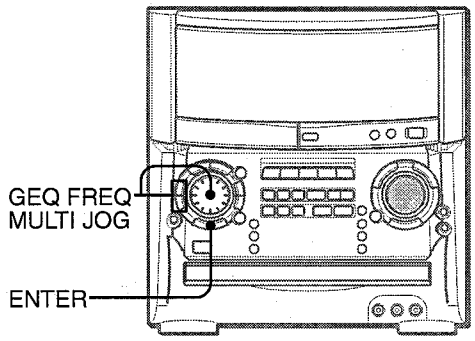
3 **Press GEQ FREQ (HIGH).**
The highest level frequency indicator flashes for 8 seconds.

4 **Within 8 seconds, turn MULTI JOG to adjust the level of the highest frequency.**



The frequency level indicators between the lowest and the highest are adjusted accordingly.

MEMORIZING THE NEW EQUALIZATION CURVES



Up to 5 customized equalization curves can be stored on the manual mode M1-M5.

***1* Set a new equalization curve with GEQ FREQ and MULTI JOG.**
See "SETTING A NEW EQUALIZATION CURVE MANUALLY" on page 12.
The created equalization curve is displayed for 8 seconds.

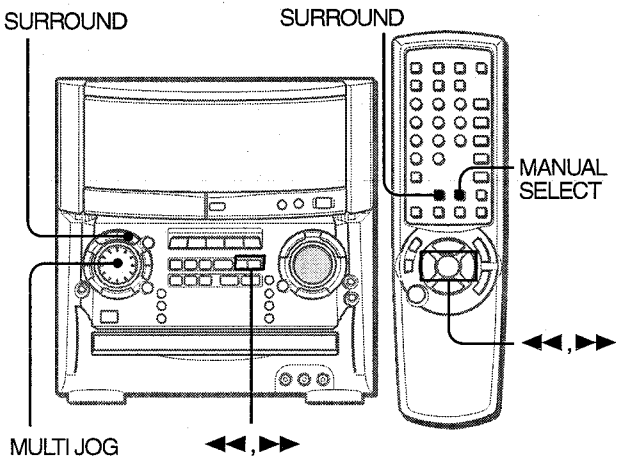
***2* Within 8 seconds, press ENTER.**
"GEQ M1" is displayed and all the manual mode indicators flash for 8 seconds. Go to step 3 within those 8 seconds.
- If this step is not completed within 8 seconds, press **GEQ FREQ** first to display "GEQ HIGH" or "GEQ LOW". Then press **ENTER** within 8 seconds.

***3* While the manual mode indicators are flashing, turn MULTI JOG to select a number among from M1 to M5 and press ENTER.**
The equalization curve is stored.

To select the stored equalization curve
1 Press **GEQ**.
2 Within 4 seconds, turn **MULTI JOG** to select a desired number among from **M1** to **M5**.

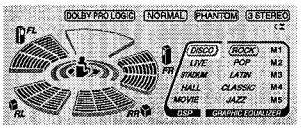
DSP SURROUND

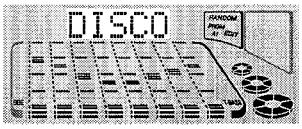
The DSP (Digital Signal Processor) SURROUND system can create the effect of sound reflected from walls and ceilings. This system enhances 5 types of sound presence.
DISCO: Sound presence of a disco
LIVE: Sound presence of a live music performance
STADIUM: Sound presence of a stadium
HALL: Sound presence of a concert hall
MOVIE: Sound presence of a movie theater



***1* Press SURROUND.**
The current mode is displayed.

***2* Within 4 seconds, turn MULTI JOG or press ◄◄ or ►► to select a desired mode.**





Equalization curves are selected automatically to match the DSP SURROUND modes and can also be selected or turned off to suit your preference.

When the music source is monaural
Select LIVE, STADIUM or MOVIE to obtain a simulated stereo effect. When DISCO or HALL is selected, no sound will be heard from the surround speakers.

To cancel the selected mode
Press **SURROUND** twice so that "DSP OFF" is displayed. The selected equalization curve remains.

To adjust the volume of the surround speakers
Press **MANUAL SELECT** twice or three times on the remote control. "S-L" or "S-R" is displayed for 2 seconds. Press ◄◄ or ►► on the remote control within these 2 seconds.
- The DOLBY PRO LOGIC (page 26) and the DOLBY DIGITAL SURROUND (page 27) surround speakers level is also changed.

NOTE

The DSP SURROUND mode is canceled when:
- the ECHO is turned on.
- the DOLBY PRO LOGIC is turned on.
- the headphones are plugged in.
- the 5.1CH (page 27) is selected.

PRESETTING STATIONS

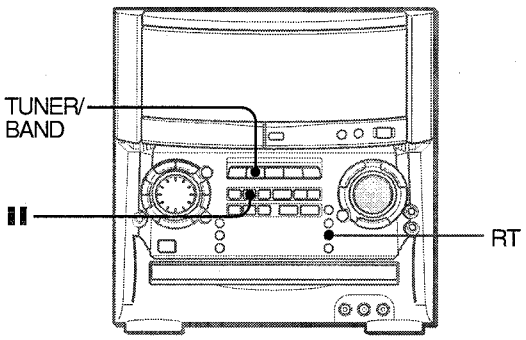
The unit can store a total of 32 preset stations. Presetting allows you to tune in to a station directly. Stations are assigned preset numbers, beginning from 1 in consecutive order for each band (FM, MW, LW).

When **TUNER/BAND** is pressed while the power is off, the power is turned on directly (Direct Play Function).

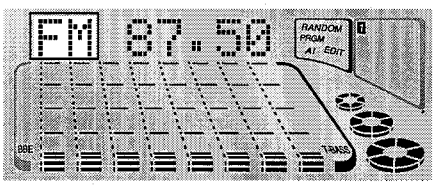
Automatic presetting:
This unit has a function for reception of *1RDS (Radio Data System) and other stations.
If there are more than 32 receivable stations, FM RDS stations take priority over other FM stations.
Manual presetting:
You can select stations to be preset from all the bands.

AUTOMATIC PRESETTING

The tuner scans through the receivable frequency range and stores stations automatically.

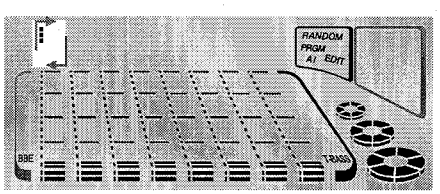


1 Press TUNER/BAND.
"FM" is displayed.



2 Keep RT pressed for 4 seconds until AUTO PRESET is displayed.

3 Press II SET within 4 seconds.
The tuner searches for a station, beginning with the FM band. When a tuned station is stored, the selected preset number flashes on the display.

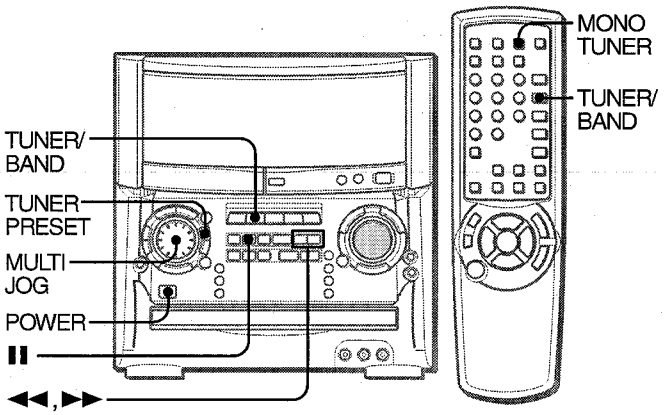


The search continues on the MW and LW bands if preset numbers are still available.
When automatic presetting has been completed, the display returns to the first preset station.

When the tuner detects *2identical RDS stations with alternative frequencies
Only the station with the stronger signal is stored.
Before storing an RDS station, the tuner checks first whether the same stations on the other frequencies are present, and stores the station with the best reception.

NOTE
When automatic presetting is done, all previously stored stations are cleared.

MANUAL PRESETTING

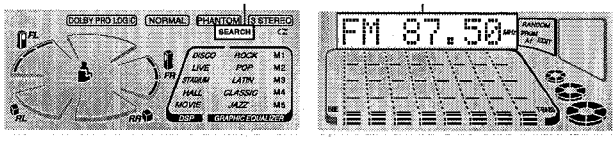


1 Press TUNER/BAND repeatedly to select the band.

→FM → MW → LW

2 Press TUNER PRESET repeatedly to select the manual tuning mode.
Each time the button is pressed, the following three tuning modes are selected cyclically.
① **Preset tuning mode:** The preset number is displayed.
② **Auto search mode:** The frequency and "SEARCH" are displayed.
③ **Manual tuning mode:** The frequency is displayed but "SEARCH" is not displayed.

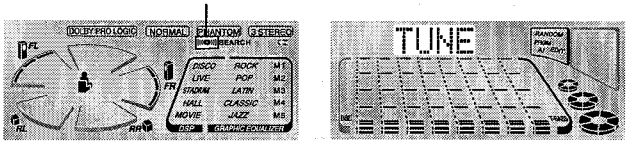
SEARCH Frequency



NOTE
The preset tuning mode is skipped if no station is preset.

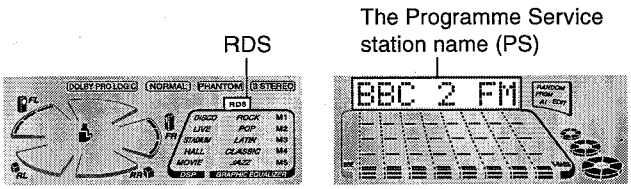
3 Turn MULTI JOG clockwise or anti-clockwise to tune in to a station.
The frequency changes as you turn the dial. When a station is received, "TUNE" is displayed for 2 seconds.
During FM stereo reception, ((◉)) is displayed.

((◉))

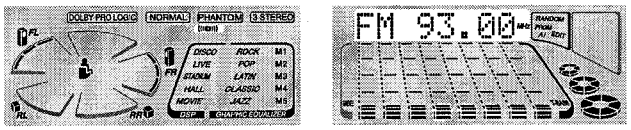


• ◀◀**DOWN** and ▶▶**UP** are also available to tune in to a station.

ⓐ When tuning in to an FM RDS station
After TUNE on the display goes out, the Programme Service station name (*3PS) is displayed and RDS lights up.



ⓑ When tuning in to the other stations
After TUNE on the display goes out, the band is displayed.



• During FM stereo reception, ((◎)) lights.

4 Press ▮▮SET to store the station.
The selected preset number flashes.

5 Repeat steps 1 to 4 to store the stations.
The next station will not be stored if a total of 32 preset stations for all the bands has already been stored.

NOTE

"FULL" is displayed if you attempt to store more than 32 preset stations.

*1 **RDS**
Today many stations transmit so-called RDS (Radio Data System) codes that contain a variety of additional information along with regular sound signals.

*2 **Identical RDS stations with alternative frequencies (AF)**
This is a list of alternative frequencies that give information on the various transmitters broadcasting the same programme in the same reception area. It enables receivers equipped with memory to store the list, and thus reduce the time needed for switching to another transmitter.

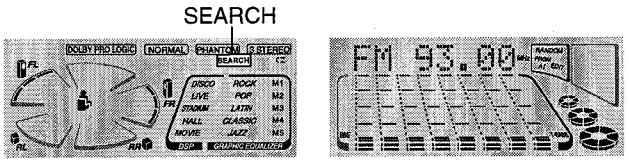
*3 **Programme service station name (PS)**
This is a name consisting of not more than 8 alphanumeric characters, which is displayed in order to inform listeners of programme services being broadcast by the radio station.
Example: BBC 1

Characters which can be displayed

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9 < > ? " ' * @ – + / = [ ]

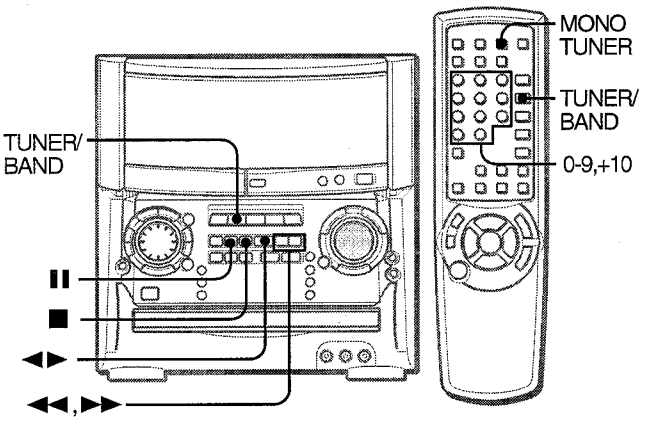
If a character transmitted by the broadcast is not applicable to receivers, a blank space is inserted.

To search for a station quickly (Auto Search)
Press **TUNER PRESET** repeatedly to display "SEARCH" (auto search mode), and turn **MULTI JOG** clockwise or anti-clockwise until the frequency starts to change rapidly. After tuning in to a station, the search stops.



To stop the Auto Search manually, turn **MULTI JOG** a little in either direction.
• The Auto Search may not stop at stations with very weak signals.
• **◀◀DOWN** and **▶▶UP** are also available to search for a station. Keep **◀◀DOWN** or **▶▶UP** pressed until the tuner starts searching. Press the button to stop the search manually.

RECEPTION BY PRESET NUMBER



1 Press TUNER/BAND to select a band.

2 Press ◀▶PRESET repeatedly.
Each time the button is pressed, the next highest number is selected.

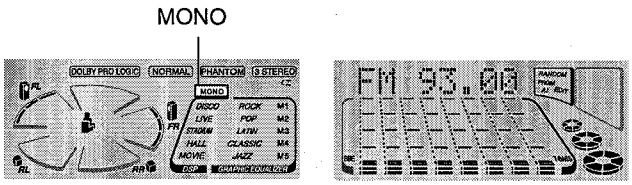
Selecting a preset number on the remote control
Press **TUNER/BAND** to select a band. Then, press the numbered buttons to select a preset number.
Example:
To select preset number 20, press **+10**, **+10** and **0**.
To select preset number 15, press **+10** and **5** .

To clear a preset station
Select the preset number of the station to be cleared. Then, press **■CLEAR**, and press **▮▮SET** within 4 seconds.
The preset numbers of all stations in the band with higher numbers are decreased by one.

To tune in to a station which is not preset
Press **TUNER/BAND** to select a band, and press **◀◀DOWN** or **▶▶UP** to select the station.

To play a tuned station when the power is off (Direct Play Function)
Press **TUNER/BAND**. The power is turned on and the tuned station is played.

When an FM stereo broadcast contains noise
Press **MONO TUNER** on the remote control so that "MONO" appears on the display.
Noise is reduced, although reception is monaural.

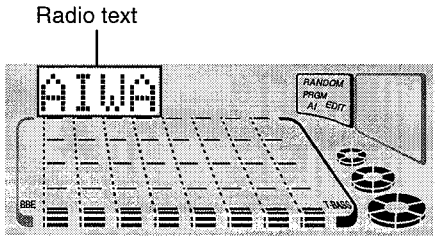


To restore stereo reception, press **MONO TUNER** on the remote control so that "STEREO" appears.

NOTE

RDS functions may not work correctly if the RDS transmission data from the station contains too much interference or the reception signal is too weak.

To display radio text (*4RT) during RDS reception
When the tuned station is transmitting RT codes, text appears on the display when **RT** is pressed.
If the tuned station is not transmitting RT codes, "NO RT" is displayed when **RT** is pressed.



To return to the normal display, press **RT** again.

*4 **Radiotext (RT)**
Information such as the cast list of a play or the title of a song is shown on the display.

*5 **Programme type identification (PTY)**
PTY allows selection of listening by one of 30 or more programme types rather than by a station.

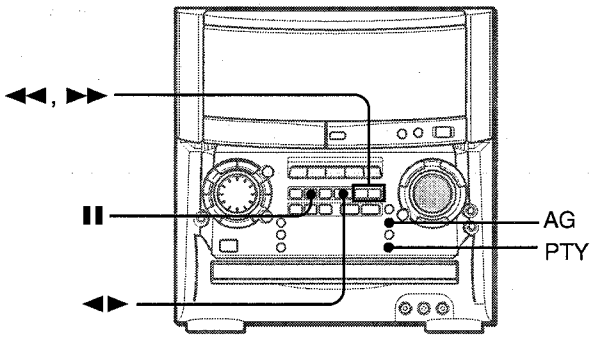
*6 **Enhanced other networks information (EON)**
EON information gives the receiver a cross reference to other stations and allows the receiver to switch from the currently tuned station to another RDS station.

*7 **Traffic programme identification (TP)**
This is a code which informs the receiver that a tuned station regularly broadcasts traffic information.

*8 **Clock-time (CT)**
CT function provides an accurate clock signal which is self adjusting to time zones and seasonal time changes.

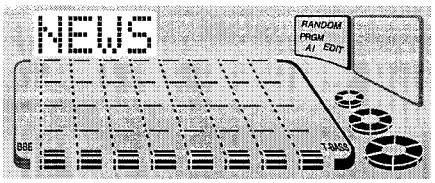
SEARCHING WITH THE HELP OF RDS CODES

Each RDS station identifies the type of programme (*5PTY) which it is currently broadcasting. If you specify a PTY, the unit can automatically detect a suitable station from the preset stations. In addition, the *6EON (Enhanced Other Networks) service works in some areas, so that searching is much faster.



TO DISPLAY THE PTY

Press PTY once during RDS reception.



Programmes are classified as follows:

TRAFFIC, NEWS, AFFAIRS (current affairs), INFO (information), SPORT, EDUCATE (education), DRAMA, CULTURE, SCIENCE, VARIED, POP M (pop music), ROCK M (rock music), EASY M (middle of the road music), LIGHT M (light classical), CLASSICS (serious classical), OTHER M (other music), WEATHER, FINANCE, CHILDREN (children's programmes), SOCIAL (social affairs), RELIGION, PHONE IN, TRAVEL, LEISURE, JAZZ, COUNTRY, NATION M (national music), OLDIES, FOLK M (folk music), DOCUMENT, TEST (alarm test), ALARM

NOTE

- If programme type information is not being transmitted, "NO PTY" is displayed.
- If undefined programme type information is being transmitted, "UNDEFINE" is displayed.
- The unit identifies TRAFFIC with one of the programme types.

TO SEARCH FOR A SPECIFIED PTY

1 Press PTY.
The programme type of the currently tuned station is displayed.

2 Within 4 seconds, press ◄◄ or ►► to select a programme type.

3 Within 4 seconds, press PTY again.
The search automatically checks every preset station. After identifying a suitable station, the station will be selected.

EON service for the PTY search
When EON service works to transmit PTY, a suitable station is detected without checking every preset station. When a station transmits EON information, it takes about 15 to 30 seconds for the unit to decode the EON information. After decoding the information, EON lights up on the display.

When a station is not found
"NOT FOUND" is displayed and the unit returns to the previous station.

When the TRAFFIC programme type is selected
The unit searches for a station transmitting a 'TP code. However, the tuned station may not be broadcasting a traffic announcement currenly. Wait for a while. The tuned station broadcasts traffic information regularly and a traffic announcement will be made.

EON SEARCH

During FM RDS reception, the unit switches to radio programmes with the specified PTY automatically as soon as they begin.

1 Press PTY.
The programme type of the currently tuned station is displayed.

2 Within 4 seconds, press ◄◄ or ►► to select a programme type.

3 Within 4 seconds, press ▮▮SET.
"EON ON" is displayed for 3 seconds. Then "EON" starts flashing and the unit enters EON search standby mode.
When a radio programme with the specified PTY in another radio station begins, it interrupts the currently playing radio programme and the radio programme with the specified PTY is heard. At this time, "EON" flashs rapidly. At the end of the radio programme with the specified PTY, the previous FM radio station is restored.
- EON search standby mode is stored until it is cancelled even if the power is turned off.

To restore the previous FM station during reception of the radio programme with the specified PTY
Press ◄►. At this time, EON search standby mode is cancelled.

To cancel EON search standby mode
Keep **PTY** pressed. (Do not release **PTY** yet.) "EON PTY" and the specified PTY are displayed alternately. At this time, press **▮▮SET** while pressing **PTY**. "EON OFF" is displayed and EON search standby mode is cancelled.

NOTE
The EON search function does not work when:
- FM stations are not preset.
- the signals of stations with the specified PTY are weak.
- FM RDS is not received.

OTHER FUNCTION OF RDS CODES

Auto GEQ function
The equalization curve is switched automatically to match the music programme type of an RDS station.

Press AG.
"AG" lights up.
To cancel, press it again.

GEQ matching PTY:

PTY	GEQ
POP M	POP
ROCK M	ROCK
LIGHT M	JAZZ
CLASSICS	CLASSICS
JAZZ	JAZZ
COUNTRY	POP
NATION M	POP
OLDIES	POP
FOLK M	JAZZ
Others	off

The selected GEQ can be changed to suit your preference by pressing **GEQ** on the remote control. During this time, the Auto GEQ function is cancelled.

Clock-time ('CT)
The CT function provides the unit with information about the local time. The CT function works whenever a CT station is received.

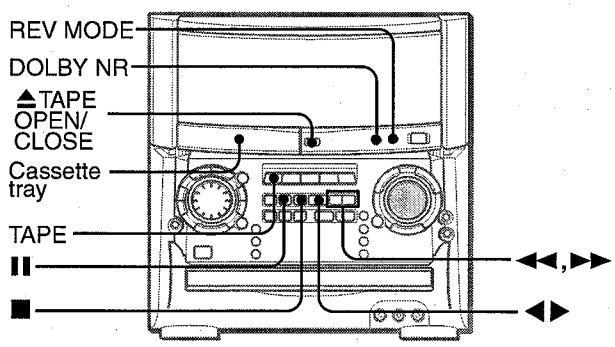
If you have not set the clock (the clock flashes on the display)
The current time can be set automatically by tuning in to an RDS station.
If no RDS station is preset, tune in to an RDS (CT) station manually by pressing ◄◄ or ►►.

If the clock does not agree with the broadcast time
An RDS signal will update the clock time on the hour every hour.

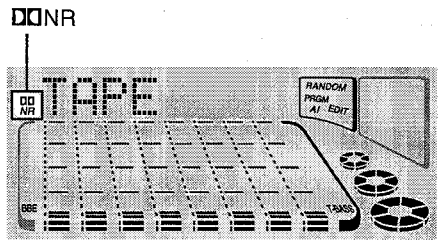
To change the MW tuning interval
The default setting of the MW tuning interval is 9 kHz/step. If you use this unit in an area where the frequency allocation system is 10 kHz/step, change the tuning interval.
Press **POWER** while pressing **TUNER/BAND** on the main unit.
To reset the interval, repeat this procedure.

NOTE
When the MW tuning interval is changed, all preset stations are cleared. The preset stations have to be set again.

BASIC OPERATIONS

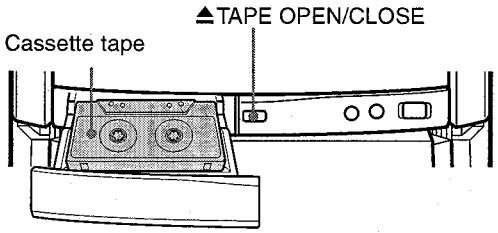


1 Press DOLBY NR to turn Dolby NR on or off to match the playback tape.



For tapes recorded with DOLBY NR, turn on DD NR.
For tapes recorded without DOLBY NR, turn off DD NR.

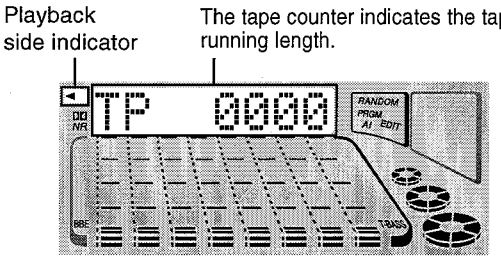
2 Press TAPE and press ▲TAPE OPEN/CLOSE to open the cassette tray.



Load a tape with the exposed side facing the unit, and the side to be played back facing upward.

3 Press ▲TAPE OPEN/CLOSE to close the cassette tray.

4 Press ◄► to start play.
To play the opposite side of the tape, press ◄► again.

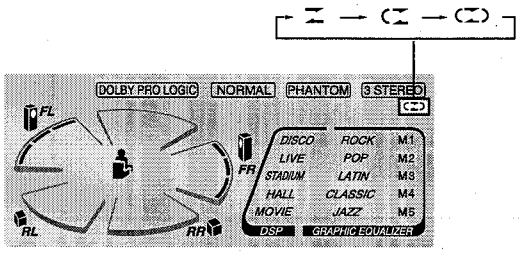


◄: The side facing upward is being played (forward).
►: The opposite side is being played (reverse).

To stop play, press ■.
To pause play, press II. To resume play, press again.
To fast forward or rewind, press ◄◄ or ►►. Then press ■ to stop the tape.

Types of tape
Use Type I (normal), Type II (high/CrO_2) or Type IV (metal) tapes for playback.

To select a reverse mode
Each time **REV MODE** is pressed, the reverse mode changes.



To play one side only, select .
To play from the side facing upward to the opposite side once only, select .
To play both sides repeatedly, select .

To start play when the power is off (Direct Play Function)
When a tape is loaded, press **TAPE**. The power is turned on and playback begins.
When **▲TAPE OPEN/CLOSE** is pressed, the power is also turned on.

To set the tape counter to "0000"
Press **■CLEAR** in stop mode.
The counter is also set to "0000" when the cassette tray is opened.

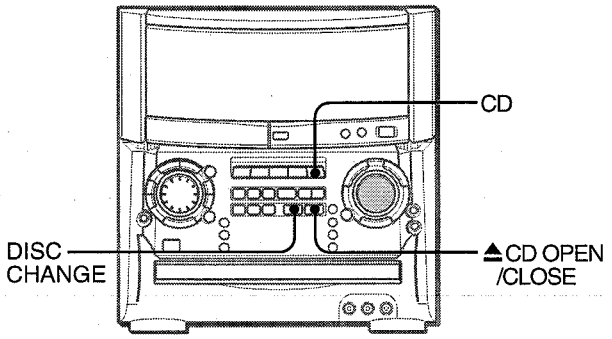
MUSIC SENSOR

If there is a 4-second or longer blank between each track, a search for the beginning of the current or next track during playback can be done easily.
When the ◄ indicator of ◄► is flashing, press ◄◄ to move to the next track or ►► to move to the beginning of the current track.
When the ► indicator of ◄► is flashing, press ►► to move to the next track, or ◄◄ to move to the beginning of the current track.

The search function may not be able to detect tracks under the following conditions:
- Blanks of less than 4 seconds between tracks
- Noisy blanks
- Long passages of low-end sound
- Low overall recording levels

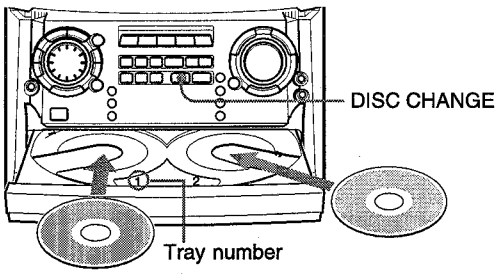
BASIC OPERATIONS

LOADING DISCS



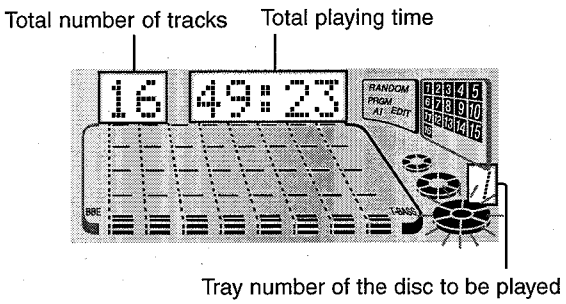
Press CD, then press ≜CD OPEN/CLOSE to open the disc compartment. Load disc(s) with the label side up.

To load one or two discs, place the discs on tray 1 and tray 2.

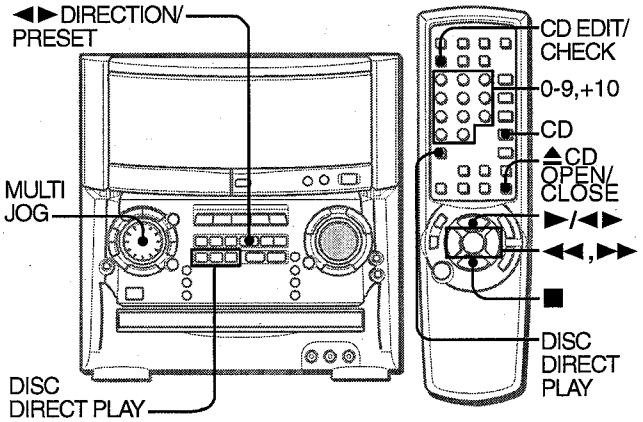


To load three discs, press **DISC CHANGE** to rotate the trays after placing two discs. Place the third disc on tray 3.

After placing the discs, press **≜CD OPEN/CLOSE** to close the disc compartment.
The display shows the information of the disc to be played.

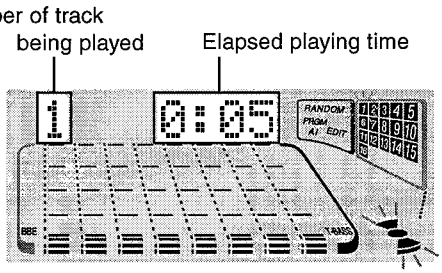


PLAYING DISCS

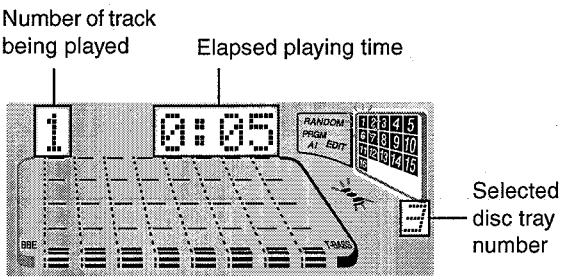


Load discs.

To play all discs in the disc compartment (continuous play), press ◄►.
Play begins with the disc on tray 1.
The indicator of **DISC DIRECT PLAY** flashes to indicate the disc being played.



To play one disc only (single disc play), press one of DISC DIRECT PLAY 1-3.
The disc with the selected tray number is played once.
Only the indicator of the selected **DISC DIRECT PLAY** flashes.



To play with the remote control
Press **DISC DIRECT PLAY**, then press one of the numbered buttons **1-3** within 3 seconds to select a disc.

To stop play, press ■.
To pause play, press ❚❚. To resume play, press again.
To search for a particular point during playback, keep ◄◄ or ►► pressed and release the button at the desired point.
To skip to the beginning of a track during playback, turn **MULTI JOG** or press ◄◄ or ►► repeatedly.
To remove discs, press **≜CD OPEN/CLOSE**.
You can only remove the two discs that face you. When the disc(s) to be removed does(do) not face you, press **DISC CHANGE** repeatedly.

To start play when the power is off (Direct Play Function)
Press **CD**. The power turns on and play of the loaded disc(s) begins.
When ▲ **CD OPEN/CLOSE** is pressed, the power is also turned on and the disc compartment is opened.

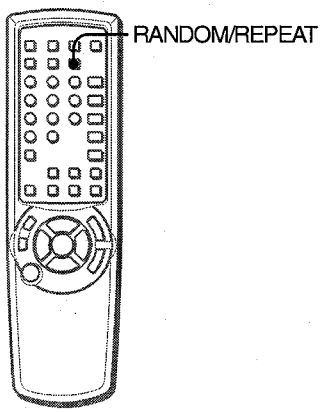
To check the remaining time
Press **CD EDIT/CHECK** on the remote control during play (except random play or programmed play). The amount of time remaining until all tracks finish playing is displayed. To restore the playing time display, press **CD EDIT/CHECK**.

Selecting a track with the remote control
1 Press **DISC DIRECT PLAY**, then press one of the numbered buttons **1-3** within 3 seconds to select a disc.
2 Press the numbered buttons **0-9** and **+10** to select a track.
Example:
To select the 25th track, press **+10**, **+10** and **5**.
To select the 10th track, press **+10** and **0**.
The selected track starts to play and play continues to the end of that disc.

Replacing discs during play
While one disc is playing, the other discs can be replaced without interrupting play.
1 Press **DISC CHANGE**.
2 Remove the discs and replace with other discs.
3 Press **▲CD OPEN/CLOSE** to close the disc compartment.

NOTE
- When loading an 8-cm (3-inch) disc, make sure to place it onto the inner circle of the tray precisely.
- Do not place more than one compact disc on one disc tray.
- Do not tilt the unit with discs loaded. Doing so may cause malfunctions.
- Do not use irregular shape CDs (*example:* heart-shaped, octagonal ones). It may result in malfunctions.
- The unit may not play a CD-R/RW disc that is recorded on personal computers or some kinds of CD-R/RW recorders because of differences in recording platforms.
- Do not attach any seal or label to either side (the recordable side or the labeled side) of a CD-R/RW disc. It may cause malfunction.

RANDOM/REPEAT PLAY



Use the remote control.

RANDOM PLAY
All the tracks on the selected disc or all the discs can be played randomly.

REPEAT PLAY
A single disc or all the discs can be played repeatedly.

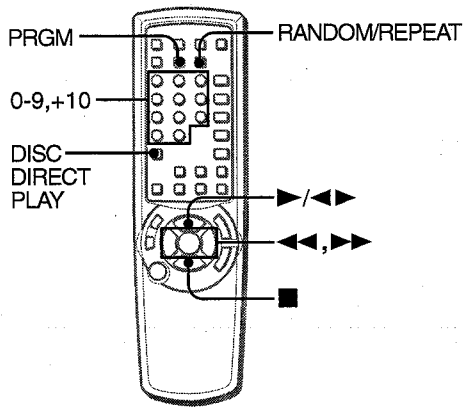
Press RANDOM/REPEAT.
Each time it is pressed, the function can be selected cyclically.
RANDOM play — The line around RANDOM lights up on the display.
REPEAT play — ↻ lights up on the display.
RANDOM/REPEAT play — The line around RANDOM and ↻ light up on the display.
Cancel — The line around RANDOM and ↻ disappear from the display.

To play all discs, press ◄► to start play.
To play a single disc, press **DISC DIRECT PLAY**, then press one of the numbered buttons **1-3** within 3 seconds to start play.

NOTE
- During random play, it is not possible to skip to the previously played track with ◄◄ or **MULTI JOG**.
- Random play is canceled when the numbered button is pressed to select a track.

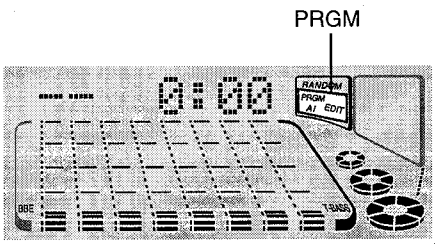
PROGRAMMED PLAY

Up to 30 tracks can be programmed from any of the inserted discs.



Use the remote control.

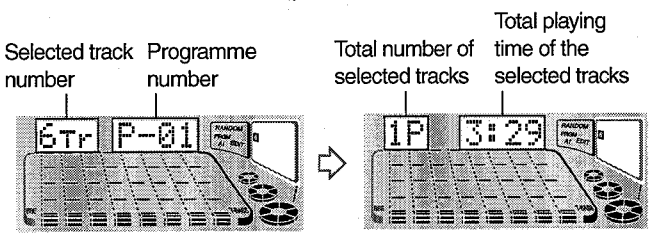
1 Press PRGM twice in stop mode.
"– –" and the line of PRGM appear on the display.



- When **PRGM** is pressed once in step 1, the unit enters the CD KARAOKE PROGRAM (page 30).

2 Press DISC DIRECT PLAY, then press one of the numbered buttons 1-3 within 3 seconds to select a disc.
Go to the next step when the tray stops rotating.

3 Press the numbered buttons 0-9 and +10 to programme a track.
Example:
To select the 25th track, press **+10**, **+10** and **5**.
To select the 10th track, press **+10** and **0**.



4 Repeat steps 2 and 3 to programme other tracks.

5 Press ◄► to start play.

To check the programme
Each time ◄◄ or ►► is pressed in stop mode, a disc number, track number, and programme number will be displayed.

To clear the programme
Press ■**CLEAR** in stop mode.

To add tracks to the programme
Repeat steps 2 and 3 in stop mode. The track will be programmed after the last programmed track.

To change the programmed tracks
Clear the programme and repeat all the steps again.

To play the programmed tracks repeatedly
After programming the tracks, press **RANDOM/REPEAT** once so that ↻ appears on the display.

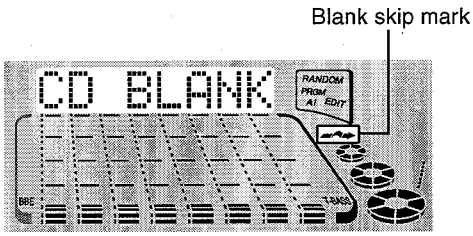
NOTE

- During programmed play, you can not use random play or check the remaining time.
- During programmed play, you can not select a track. "Can't USE" is displayed if you attempt to select a track.
- "FULL" is displayed if you attempt to programme more than 30 tracks.

BLANK SKIP PLAY

The silent portions between tracks recorded on a CD can be skipped during playback.

1 Press CD BLANK SKIP on the main unit.
"CD BLANK SKIP ON" is displayed and a blank skip mark will appear in the display.



2 Press ◄► to start playback.
The silent portions between tracks will be skipped, and the sound will be played back without interruption. If a track fades out (ends with the sound gradually decreasing), the fadeout portion will also be skipped.

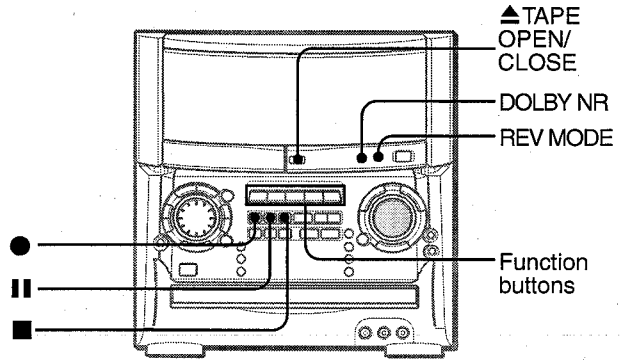
To return to normal playback
Press **CD BLANK SKIP** again. "CD BLANK SKIP OFF" is displayed and the blank skip mark in the display will disappear.

NOTE

- There may be cases where BLANK SKIP PLAY does not function correctly.
- BLANK SKIP PLAY is automatically canceled when performing AI EDIT RECORDING (page 23), PROGRAMMED EDIT RECORDING (page 24), or recording during PROGRAMMED PLAY (left column) or RANDOM PLAY (page 20).

BASIC RECORDING

This section explains how to record from the tuner, CD player, or external equipment.

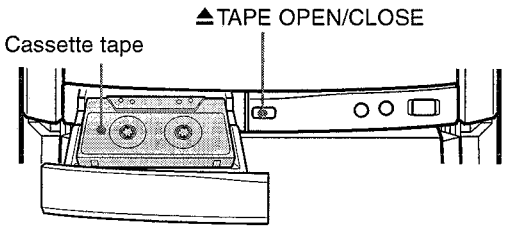


Preparation

- Set the tape to the point where recording will start.
- Use Type I (normal) and Type II (high/CrO_2) tapes for recording.

1 Load a tape to be recorded.

Load the tape with the exposed side facing the unit, and the side to be recorded facing upward.



To open or close the cassette tray, press **▲TAPE OPEN/ CLOSE**.

2 Press REV MODE to select the reverse mode.

To record on one side only, select ⇄.
To record on both sides, select ⇄ or ⇄.

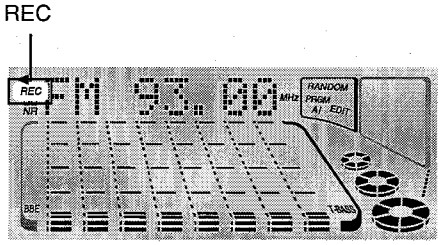
3 Press DOLBY NR to turn Dolby NR on or off.

To record with DOLBY NR, turn on DD NR.
To record without DOLBY NR, turn off DD NR.

4 Press one of the function buttons and prepare the source to be recorded.

To record from a CD, press **CD** and load the disc(s).
To record from a radio broadcast, press **TUNER/BAND** and tune in to a station.
To record from the connected source, press **VIDEO1/2/3** or **AUX/PHONO/5.1CH** and play.

5 Press ●REC/REC MUTE to start recording.



When the selected function is CD, playback and recording start simultaneously.

To stop recording, press ■.
To pause recording, press II. (Applicable when the recording source is TUNER, VIDEO1/2/3 or external equipment connected to **AUDIO IN** jacks on the rear or the front.)
To resume recording, press again.

To start recording with the remote control
First press **●/OREC/REC MUTE**, and then press ◄► within 2 seconds.

NOTE

"Can't REC" is displayed if you attempt to record on a tape with the plastic tabs broken off.

SOUND ADJUSTMENT DURING RECORDING

The output volume and tone (except BBE, MIC and ECHO) of the speakers or headphones are freely varied without affecting the recording.

NOTE

If squealing or beating sounds occur when recording MW or LW broadcast, press **MONO TUNER** on the remote control to select "BEAT 1" or "BEAT 2", so as to eliminate the noise. When "BEAT 1" is selected, "BEAT" appears in the display window.

INSERTING BLANK SPACES

Insertion of 4-second blank spaces enables you to activate the Music Sensor function. (Applicable when the source is TUNER, VIDEO1/2/3 or AUX/PHONO/5.1CH.)

1 **Press ●REC/REC MUTE during recording or while in recording pause mode.**
"REC" on the display flashes for 4 seconds and a 4-second blank space is made. Then, the deck enters the recording pause mode.
2 **Press II to resume recording.**

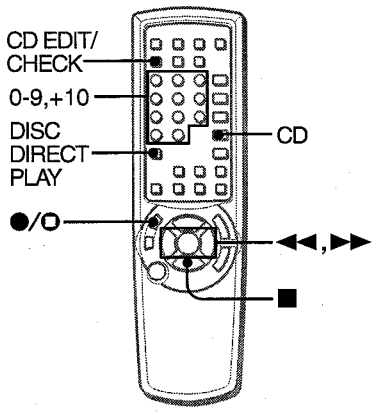
To insert a blank space of less than 4 seconds, press **●REC/ REC MUTE** again while "REC" is flashing.
To insert blank spaces of more than 4 seconds, after the deck enters recording pause mode, press **●REC/REC MUTE** again. Each time the button is pressed, a 4-second blank space is added.

To erase a recording

Make sure the microphone is not connected to the unit.
Set the microphone volume and the echo level to OFF (page 28).

1 Press **TAPE** and load the tape to be erased.
2 Set the tape to the point where the erasure is to be started.
3 Set the reverse mode by pressing **REV MODE**.
4 Press **●REC/REC MUTE** to start the erasure.

AI EDIT RECORDING



The AI edit recording function enables CD recording without worrying about tape length and track length. When a CD is inserted, the unit automatically calculates the total track lengths. If necessary, the order of tracks is rearranged so that no track is cut short.
(AI: Artificial Intelligence)

NOTE

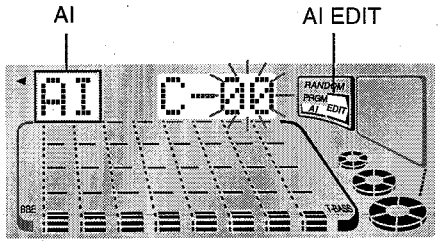
The AI edit recording will not start from a point halfway through the tape. The tape must be recorded from the beginning of either side.

Use the remote control from steps 3 to 6.

***1* Load the tape into the cassette tray, and press DOLBY NR to turn Dolby NR on or off.**
Load the tape with the side to be recorded on first facing upward.

***2* Press CD and load the disc(s).**

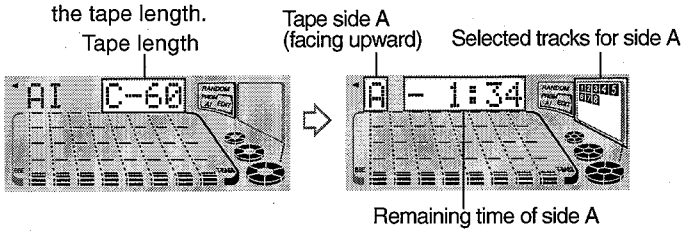
***3* Press CD EDIT/CHECK once.**
The lines of AI EDIT and "AI" light up on the display.



When "PRGM" is selected, press **CD EDIT/CHECK** again.

***4* Press DISC DIRECT PLAY, then press one of the numbered buttons 1-3 within 3 seconds to select a disc.**

***5* Press the numbered buttons 0-9 to designate the tape length.**
10 to 99 minutes can be specified.
Example: When using a 60-minute tape, press **6** and **0**.
In a few seconds, the tracks to be recorded on each side of the tape are determined.
• ◄◄ , ►► and **MULTI JOG** are also available to designate the tape length.

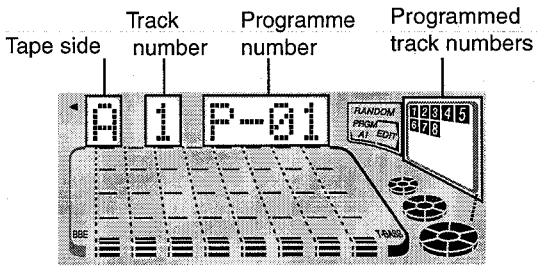


***6* Press ●/O REC/REC MUTE, and then press ►/◄► within 2 seconds to start recording.**
The tape is rewound to the beginning of the side facing upward, the lead segment is played through for 10 seconds, and recording starts. When recording on the side facing upward (side A) ends, recording on the other side (side B) starts.

To stop recording
Press ■. Recording and CD play stop simultaneously.

To clear the edit programme
Press ■**CLEAR** twice so that the line of EDIT disappears from the display.

To check the order of the edit programme
Before recording, press **CD EDIT/CHECK** to select side A or B, and press ◄◄ or ►► repeatedly.



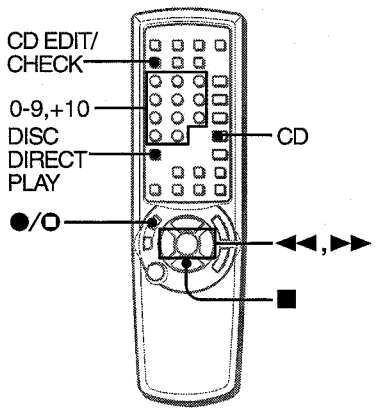
To add tracks from other discs to the edit programme
If there is any time remaining on the tape after step 5, you can add tracks from other discs in the CD compartment.
1 Press **CD EDIT/CHECK** to select side A or B.
2 Press **DISC DIRECT PLAY**, then press one of the numbered buttons **1-3** within 3 seconds to select a disc.
3 Press the numbered buttons **0-9** and **+10** to select tracks.
A track whose playing time is longer than the remaining time cannot be programmed.
4 Repeat steps 2 and 3 to add more tracks.
5 Start recording.
The line of AI lights off and the line of PRGM lights up.

Time on cassette tapes and editing time
The actual cassette recording time is usually a little longer than the specified recording time printed on the label. This unit can programme tracks to use the extra time. When the total recording time is a little longer than the tape's specified recording time after editing, the display shows the extra time (without a minus mark), instead of the time remaining on the tape (with the minus mark).

NOTE

- Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.
- The AI edit function cannot be used with discs containing 31 tracks or more. "TR OVER" is displayed if this is attempted.

PROGRAMMED EDIT RECORDING



In the programmed edit recording function, the tracks can be programmed while checking the remaining time on each side of the tape as the tracks are programmed.

NOTE

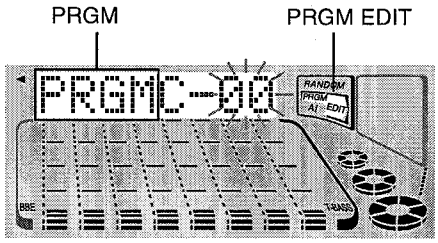
The programmed edit recording will not start from a point halfway through the tape. The tape must be recorded on from the beginning of either side.

Use the remote control from steps 3 to 8.

1 **Load the tape into the cassette tray, and press DOLBY NR to turn Dolby NR on or off.**
Load the tape with the side to be recorded on first facing upward.

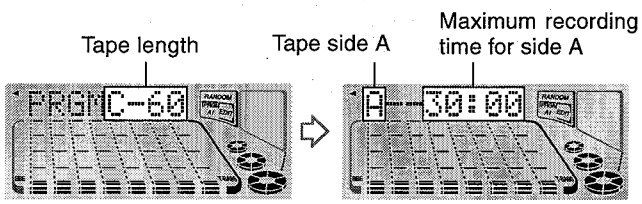
2 **Press CD and load the disc(s).**

3 **Press CD EDIT/CHECK twice.**
The lines of PRGM EDIT and "PRGM" light up on the display.



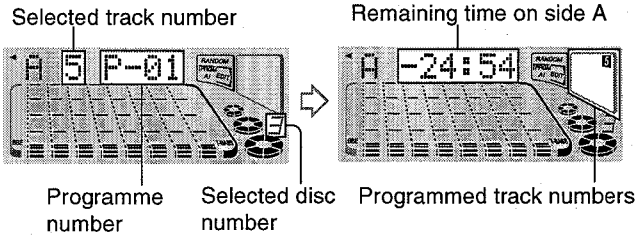
When "AI" is selected, press **CD EDIT/CHECK** again.

4 **Press the numbered buttons 0-9 to designate the tape length.**
10 to 99 minutes can be specified.



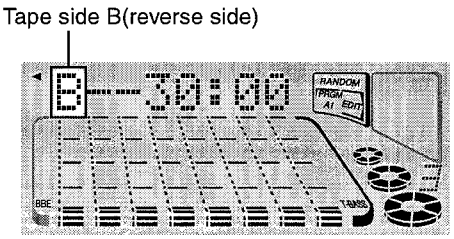
- ◄◄ , ►► and **MULTI JOG** are also available to designate the tape length.

5 **Press DISC DIRECT PLAY, then press one of the numbered buttons 1-3 within 3 seconds to select a disc. Then, press the numbered buttons 0-9 and +10 to programme a track.**
Example: To select the 10th track of disc 2, press **DISC DIRECT PLAY** and **2**, then **+10** and **0**.



6 **Repeat step 5 for the rest of the tracks for side A.**
A track whose playing time is longer than the remaining time cannot be programmed.

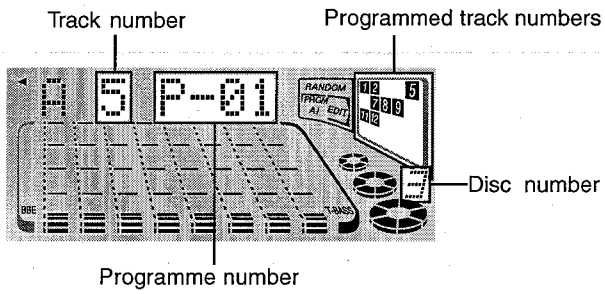
7 **Press CD EDIT/CHECK to select side B and program the tracks for side B.**
After confirming B on the display, repeat step 5.



8 **Press ●/O REC/REC MUTE, and then press ►/◄► within 2 seconds to start recording.**
The tape is rewound to the beginning of the side facing upward, the lead segment is played through for 10 seconds, and recording starts. When recording on the side A facing upward ends, recording on the other side B starts.

To stop recording
Press ■. Recording and CD play stop simultaneously.

To check the order of the programmed track numbers
Before recording, press **CD EDIT/CHECK** to select side A or B, and press ◄◄ or ►► repeatedly.



To change the programme of each side
Press **CD EDIT/CHECK** to select side A or B, and press **■ CLEAR** to clear the program on the selected side. Then program tracks again.

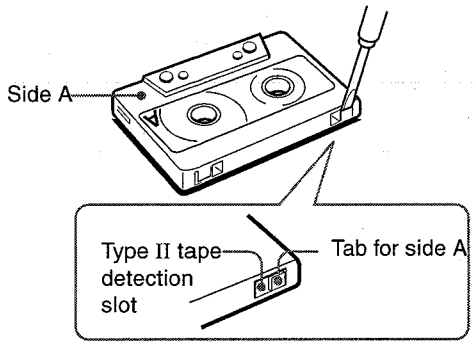
To clear the edit programme
Press **■ CLEAR** twice so that the line of EDIT disappears on the display.

NOTE

- Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.
- Up to 30 tracks can be programmed from any of the inserted discs.
- "FULL" is displayed if you attempt to programme more than 30 tracks.

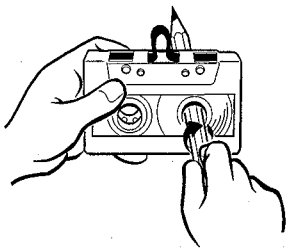
About cassette tapes

- **To prevent accidental erasure**, break off the plastic tabs on the cassette tape after recording with a screwdriver or other pointed tool.



To record on the tape again, cover the tab openings with adhesive tape, etc. (On Type II tapes, take care not to cover the Type II tape detection slot.)

- **120-minute or longer tapes** are extremely thin and easily deformed or damaged. They are not recommended.
- **Take up any slack in** the tape with a pencil or similar tool before use. Slack tape may break or jam in the mechanism.



DOLBY NR system

The Dolby Noise Reduction system reduces tape hiss noise. For optimum performance when playing back a tape recorded with the DOLBY NR system, turn on the DOLBY NR system.

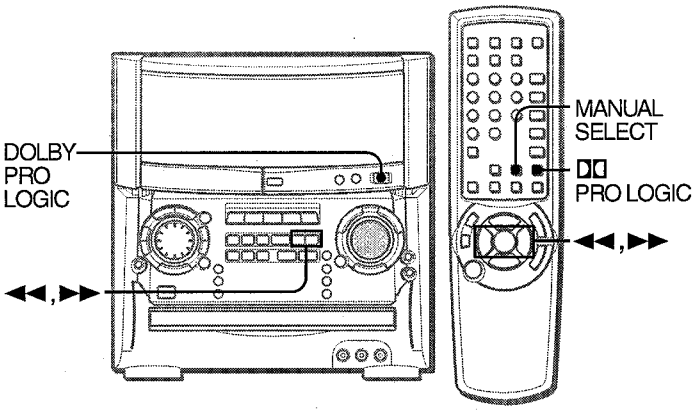
DOLBY SURROUND

The DOLBY PRO LOGIC feature and the centre and surround speakers (standard) assure full-scale home theater sound. When playing back laser discs or video software that have been recorded in Dolby Surround, astonishingly realistic sound surrounds the listener to create a new level of audio/visual entertainment.
Independent control of the five sound channels allows the listener to enjoy the same type of sound reproduction experienced in movie theaters. Voices are reproduced in the front and centre sound field, while ambient sounds like cars and crowds are reproduced on all sides of the listener for an incredibly lifelike audio/video experience. Please read the following carefully to "tune" the system's output to match the characteristics of your listening space.

Check the following:

- **Before using the DOLBY PRO LOGIC, adjust the proper balance of speaker sound levels.**
- Make sure the supplied speakers are properly connected and positioned (see page 5).
- Make sure the TV set and video unit are properly connected (see page 7).
- Make sure the laser disc, video tape, etc., support DOLBY SURROUND.

ADJUSTING SPEAKER LEVEL

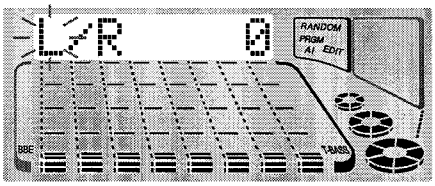


The unit is equipped with a built-in test signal generator called a noise sequencer for easy balance adjustment of all 5 channels. The sequencer outputs a noise signal that "travels" from channel to channel, enabling the simple adjustment of sound level to achieve, at the listening position, the same apparent loudness from each channel.

1 Press DOLBY PRO LOGIC to select NORMAL.

"NORMAL" is displayed.
If "PHANTOM" or "3 STEREO" is displayed, press **DOLBY PRO LOGIC** repeatedly until "NORMAL" is selected.

2 Press MANUAL SELECT and hold it down for about 4 seconds until "L" flashes.

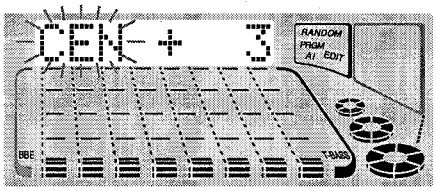


A noise signal is sent to each channel in turn in the following sequence.

L: Left speaker → **CEN:** Centre speaker → **R:** Right speaker
S-L: Left surround speaker ← **S-R:** Right surround speaker

3 Adjust the sound level of the centre and the surround speakers.

While "CEN", "S-R" or "S-L" is displayed, press ◀◀ or ▶▶ to adjust the volume of the centre or surround speakers to match the level of the left and right speakers.



To adjust the balance between the left and right front speakers, see page 11.

4 Press MANUAL SELECT again to stop the noise signal.

NOTE

- If the surround speakers or the centre speaker level of the DOLBY PRO LOGIC is changed, that of the DSP SURROUND system (page 13) and the DOLBY DIGITAL SURROUND (page 27) is also changed.
- While "S-R" or "S-L" is displayed, both surround speakers output the noise signal together. However, only the sound level of one surround speaker displayed as "S-R" or "S-L" can be adjusted.
- When the sequencer outputs a noise signal, a clicking sound might be heard from the speakers due to the characteristics of the circuit. This is not malfunction.

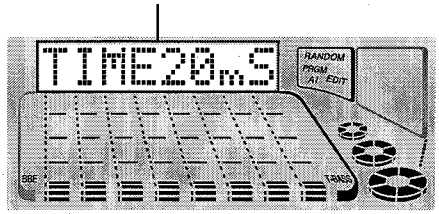
About the channels

The left and right speakers create the stereo effect.
The centre speaker helps achieve precise sound positioning over a broad sound field.
The surround speakers enhance the "depth" of the sound field.

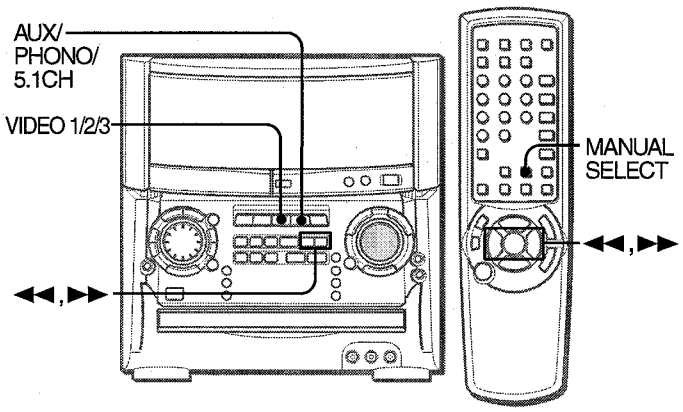
To change the delay time

The surround speakers reproduce sounds a split second after the front speakers. The delay is initially set to 20 ms (milliseconds). To change this standard delay time, press **MANUAL SELECT** on the remote control repeatedly in NORMAL or PHANTOM mode until "TIME" is displayed. Then, press the ◀◀ or ▶▶. Each time one of the buttons is pressed, the delay time changes as shown below.

15ms ◀▶ 20ms ◀▶ 30ms



PLAY WITH DOLBY PRO LOGIC



1 Press VIDEO 1/2/3 or AUX/PHONO/5.1CH. Then start playback of the video source.

2 Press DOLBY PRO LOGIC.

NORMAL is selected, and the playback sound has the DOLBY PRO LOGIC effect.

To cancel DOLBY PRO LOGIC mode

Press **DOLBY PRO LOGIC** repeatedly until "OFF" is displayed.

To change the sound levels during playback

After adjusting the balance with the noise sequencer, the sound levels of the centre or surround speakers can be adjusted during playback of laser discs or video software.

1 Press **MANUAL SELECT** on the remote control repeatedly to select "CEN" (centre), "S-R" (surround right) or "S-L" (surround left).
2 While the "CEN", "S-R" or "S-L" is displayed, press ◀◀ or ▶▶ on the remote control to adjust the volume.

ADDITIONAL DOLBY PRO LOGIC MODES

In addition to the NORMAL mode, this unit is also equipped with the PHANTOM and the 3 STEREO modes.

PHANTOM mode: Use this mode when no centre speaker is connected. The centre channel signals are output through the left and right speakers.

3 STEREO mode: Use this mode when no surround speakers are connected. This mode reproduces rear sounds through the front speakers.

To select PHANTOM or 3 STEREO

Press **DOLBY PRO LOGIC** repeatedly until the desired DOLBY PRO LOGIC mode is displayed. The DOLBY PRO LOGIC mode is displayed cyclically as follows.

NORMAL → PHANTOM → 3 STEREO → OFF (cancel) → NORMAL

To adjust the balance of connected speaker sound levels

Carry out steps 2 to 4 on page 26.

NOTE

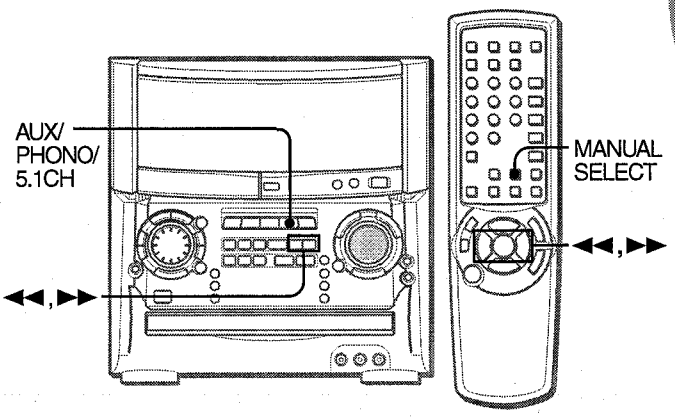
- Depending on the sound source and/or listening conditions, surround effect may not be obtained even when the DOLBY PRO LOGIC is on.
- The full DOLBY PRO LOGIC effect cannot be obtained when using software without DOLBY SURROUND mark. In this case, use the DSP SURROUND system instead (see page 13).
- The DOLBY PRO LOGIC is automatically canceled when:
  - the ECHO is turned on.
  - the DSP SURROUND system or the BBE is turned on.
  - the headphones are plugged in.
  - the Karaoke function is turned on.
  - the 5.1CH (page 27) is turned on.
- Set the microphone volume to OFF while the DOLBY PRO LOGIC is on. Otherwise, the DOLBY PRO LOGIC sound cannot be reproduced correctly.

When too high signals are input

When input analog signals from the connected equipment are too high to accept, ▶ on the left of "DOLBY PRO LOGIC" in the display lights up.

In this case, turn down the input level. If not, erroneous operation will be carried out in the processor.

LISTENING TO DOLBY DIGITAL SURROUND SOUND



Preparation

Complete the connection on page 8 at first.

When a DVD player is connected to **5.1CH INPUT** jacks of this unit, you can listen to DOLBY DIGITAL SURROUND sound, which enables you to enjoy theatre-quality sound in your home.

1 Press AUX/PHONO/5.1CH repeatedly until "5.1ch IN" is displayed.

DOLBY DIGITAL SURROUND is turned on.

2 Press ◀◀ or ▶▶ to adjust the input level while "5.1ch IN" is displayed.

The input level can be selected from MIN (0) to MAX (7).

3 Start playing DOLBY DIGITAL SURROUND sound on the DVD player.

NOTE

- The DOLBY PRO LOGIC, the BBE, the DSP SURROUND system, Karaoke function, MIC and ECHO are automatically canceled when the 5.1CH is selected.
- Make sure the software played back with the connected equipment support the DOLBY DIGITAL SURROUND.
- The function is changed from the 5.1CH to the AUX when:
  - the headphones are plugged in.
  - the DSP SURROUND system, the DOLBY PRO LOGIC or the Karaoke function is turned on.
  - the MIC or ECHO level is changed.

To adjust the sound levels of the speakers while listening to the source (DOLBY DIGITAL SURROUND)

1 Press **AUX/PHONO/5.1CH** repeatedly until "5.1ch IN" is displayed.
DOLBY DIGITAL SURROUND is turned on.

2 Press **MANUAL SELECT** on the remote control repeatedly. Speaker name appears in turn as follows:

L/R (Front Left/Right) → CEN (Centre) → S-L (Surround Left) → S-R (Surround Right) → S-W (Sub woofer) → L/R

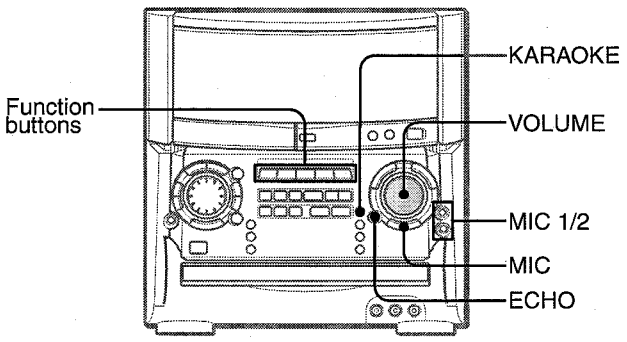
3 Press ◀◀ or ▶▶ to adjust the sound level while "L/R", "CEN", "S-L", "S-R" or "S-W" is displayed.

4 Repeat steps 2 and 3 to adjust each speaker's sound level.

NOTE

If the surround speakers or the centre speaker level of the DOLBY DIGITAL SURROUND is changed, that of the DSP SURROUND system (page 13) and the DOLBY PRO LOGIC (page 26) is also changed.

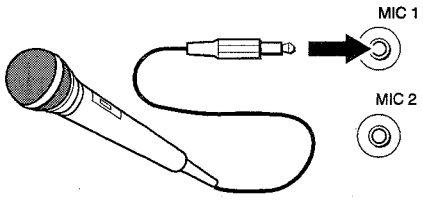
MICROPHONE MIXING



Two microphones (not supplied) can be connected to this unit, allowing you to sing along to music sources.
Use microphones with standard plugs (ø6.3 mm, 1/4 inch).

Before connecting a microphone
Press **MIC** and turn **VOLUME** anti-clockwise until "MIC OFF" is displayed.

1 Connect your microphones to MIC 1 and MIC 2 jacks.



2 Press one of the function buttons to select the source to be mixed, and play the source.

3 Adjust the volume and tone of the source.

4 Press MIC and turn VOLUME within 4 seconds to adjust the microphone volume.

The microphone volume can be selected from 1 to MAX (7) or OFF (cancel).
The volume of both microphones is adjusted simultaneously.

5 Press ECHO and turn VOLUME within 4 seconds to adjust the echo level.

The echo level can be selected from 1 to MAX (7) or OFF (cancel).

To change the delay time of echo
Hold down **ECHO** while the echo is on. "ECHO-L" (Long) and "ECHO-M" (Middle) are displayed alternately. At the desired position, release the button.

To record microphone sound mixed with source sound
Follow the procedure for recording from the sound source (see page 22).

When the microphones are not in use
Set the microphone volume and echo level to OFF and remove the microphones from **MIC** jacks.

NOTE

- ECHO is reset to OFF automatically when the function is changed, the DOLBY PRO LOGIC or one of the DSP SURROUND mode buttons is pressed, the power is turned off, or the AC cord is disconnected.
- If the MIC or ECHO is turned on while the 5.1CH (page 27) is selected, the 5.1CH is changed to the AUX.
- When the ECHO level is changed, the DSP SURROUND system and the DOLBY PRO LOGIC are automatically canceled.
- If a microphone is held too near the speakers, a howling sound may be produced. In this case, hold the microphone away from the speakers, or decrease the microphone volume.
- If sound through the microphone is extremely loud, it may be distorted. In this case, decrease the microphone volume.

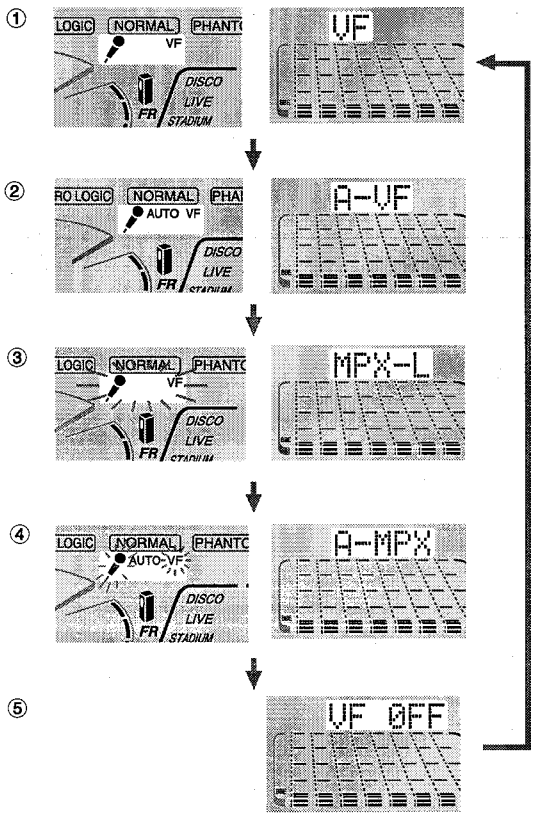
Recommended microphones
Use of unidirectional type microphones is recommended to prevent howling. Contact your local Aiwa dealer for details.

VOCAL FADER/MULTIPLEX FUNCTIONS

This unit can use discs or tapes as Karaoke sources.
- Use the vocal fader function for ordinary discs or tapes.
- Use the multiplex function for multi audio discs or tapes.

Press KARAOKE repeatedly to select the vocal fader or multiplex function.

Each time **KARAOKE** is pressed, one of the following functions is selected cyclically.



① Vocal Fader
The singer's voice becomes softer than the accompaniment.

② Auto Vocal Fader
The singer's voice becomes softer only while there is audio input through a microphone.

③ Multiplex
Only the sound on the left channel is heard from both speakers, and the sound on the right channel is muted.

④ Auto Multiplex
The sound on the left channel is heard from both speakers, and the sound on the right channel is muted only while there is audio input through a microphone.

⑤ Cancel

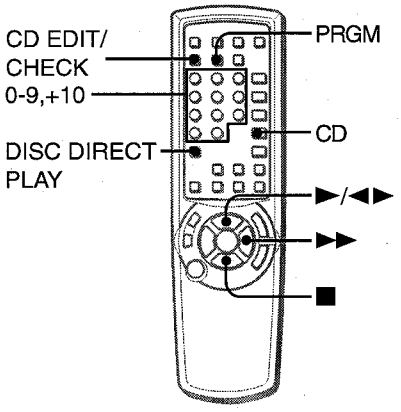
To change the time lag setting in Auto Vocal Fader or Auto Multiplex function
The muted original singer's voice can be restored faster.
When Auto Vocal Fader or Auto Multiplex is selected, "A-VF" or "A-MPX" is displayed for 3 seconds and disappears. Then hold down **KARAOKE** until "FAST" is displayed.
To return to the initial setting, select SLOW.
When the power is turned off, SLOW is restored.

To change the audible channel in Multiplex function
Only the sound on the right channel can be heard from both speakers.
When Multiplex is selected, "MPX-L" is displayed for 3 seconds and disappears. Then the selected function name is displayed, hold down **KARAOKE** until "MPX-R" is displayed.
To return to the initial setting, select MPX-L.
When the power is turned off, MPX-L is restored.

NOTE

- The Karaoke functions may not operate correctly with the following kinds of CDs or tapes.
  - Those with monaural sound
  - Those recorded with strong echoes
  - Those with the vocal part recorded on the right or left side of the sound
- While the Karaoke function is on, the sound is output as monaural.
- When the function is changed, the power is turned off or the AC cord is disconnected from the AC power outlet, the Karaoke function is canceled.

CD KARAOKE PROGRAM



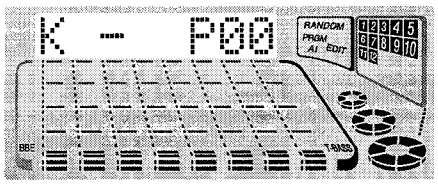
Before or during CD play, you can reserve up to 15 tracks to be played after the current track. Each reservation is cleared when it finishes playing.

Use the remote control.

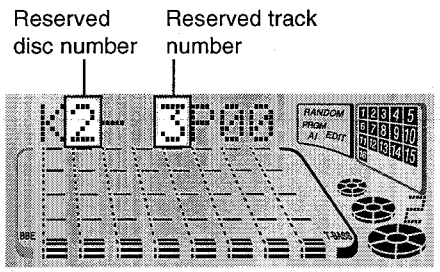
***1* Press CD and load the discs.**

***2* Press PRGM <u>once</u>.**

After "CD KARAOKE" scrolls on the display, "K-P00" appears.



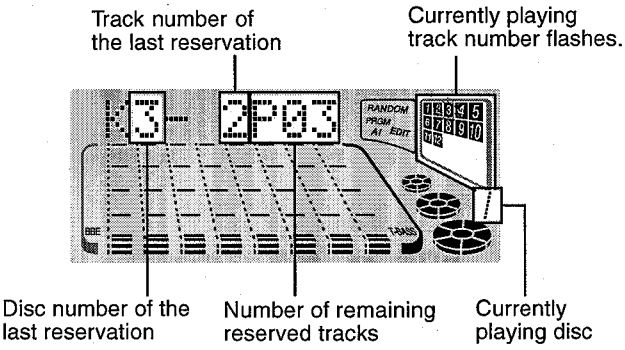
***3* Press DISC DIRECT PLAY, then press one of the numbered buttons 1-3 within 3 seconds to select a disc. Then, press the numbered buttons 0-9 and +10 to select a track.**



***4* Repeat step 3 to reserve other tracks.**

***5* Press ◄► to start play.**

After a track is played, it is cleared from the programme.



To add a reservation during play

Repeat step 3.

To check the reserved tracks

Press **CD EDIT/CHECK** repeatedly. Each time it is pressed, the disc number and track number are displayed in the reserved order.

To stop play

Press ■. When ◄► is pressed, the play starts from the last track again.

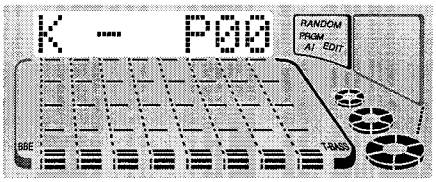
To skip a track

Press ►►.

The skipped track is cleared from the program.

To clear all the reservations

Press ►► repeatedly until "K - P00" is displayed.

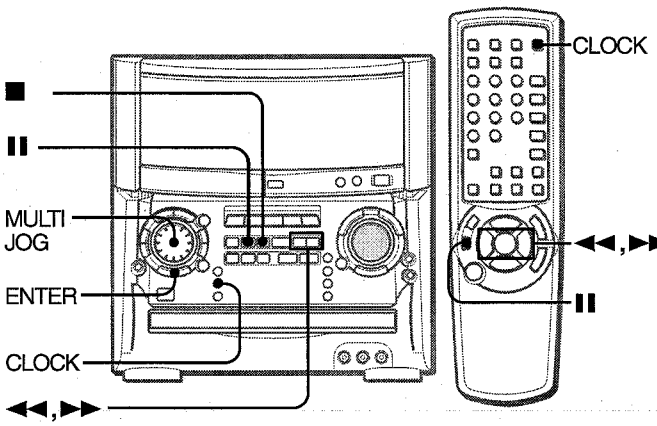


Press it once more to cancel the Karaoke programs. The display returns to that of CD play.

NOTE

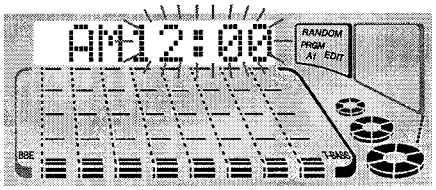
- If the reserved track number does not exist on the selected disc, the unit stops playing and the display flashes. In this case, press ►► to skip the error track. Then press ◄► to start play with the next reserved track.
- When **PRGM** is pressed twice in step 2, "– – 0:00" is displayed and the unit enters CD programmed play mode (page 21). To cancel programmed play, press ■.

SETTING THE CLOCK



When the clock is set, the ":" between the hours and minutes flashes. When the clock setting is canceled due to a power failure, the entire clock display flashes.

1 Press CLOCK.



2 Within 4 seconds, turn MULTI JOG to designate the hour and the minute.

Turning **MULTI JOG** changes both the hour and the minute. ◄◄ or ►► is also available instead of **MULTI JOG**. Holding these buttons down will vary the time rapidly.

3 Press ENTER or II.

The clock starts from 00 seconds.

To view the clock when another display is in the display
Press **CLOCK**. The time is displayed for 4 seconds and then the original display reappears. However, the clock cannot be displayed during recording.

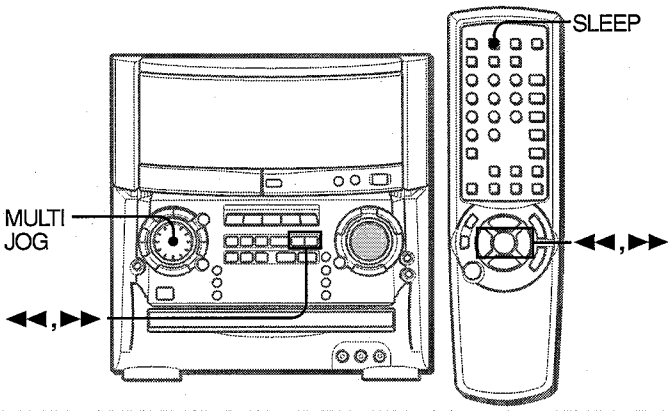
To switch to the 24-hour standard
Press **CLOCK** and then press ■ within 4 seconds.
Repeat the same procedure to restore the 12-hour standard.
In the 12-hour standard, "AM12:00" indicates midnight and "PM12:00" indicates noon.

If the clock display flashes
If the display flashes when the clock is displayed, it indicates that the clock has stopped due to a power failure or the removal of the power cord. The current time needs to be reset.

NOTE

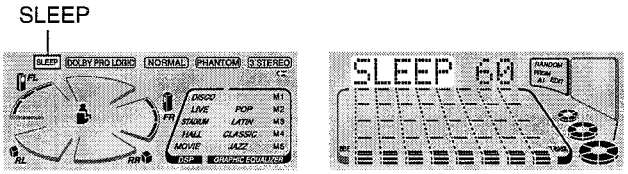
If the power-economizing mode (page 10) is on, the unit blacks out when the power is turned off. To view the clock, press **CLOCK** so that the time is displayed for 4 seconds.

SETTING THE SLEEP TIMER



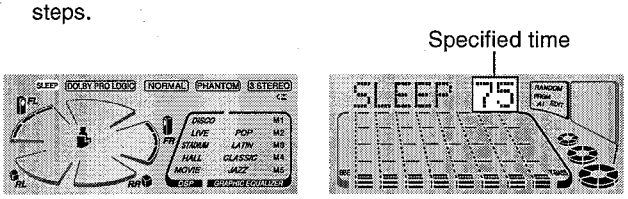
The unit can be turned off automatically at a specified time.

1 Press SLEEP on the remote control.



2 Within 4 seconds, turn MULTI JOG or press ◄◄ or ►► to specify the time until the power is turned off.

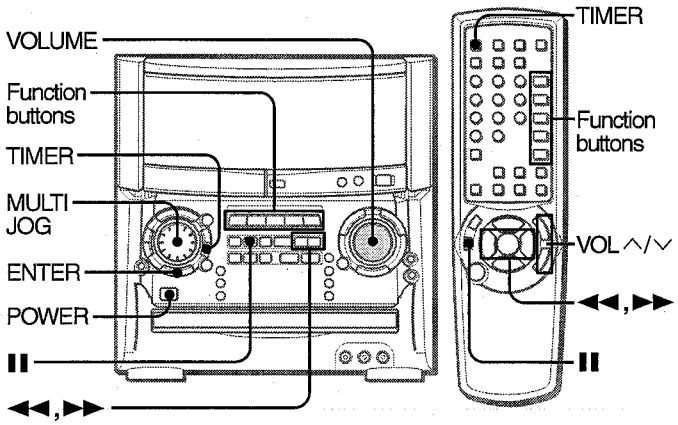
The time changes between 5 and 240 minutes in 5-minute steps.



To check the time remaining until the power turns off
Press **SLEEP** once. The remaining time is displayed for 4 seconds.

To cancel the sleep timer
Press **SLEEP** twice so that "SLEEPoFF" appears.

SETTING THE TIMER

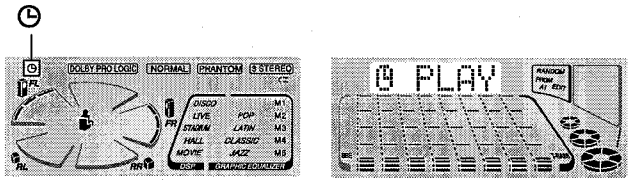


The unit can be turned on at a specified time every day with the built-in timer.

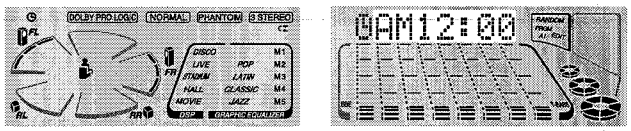
Preparation
Make sure the clock is set correctly.

***1* Press one of the function buttons to select a source.**

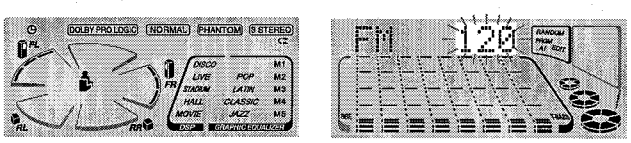
***2* Press TIMER once so that ◷ appears on the display.**
Time and audio source name flash alternately.



***3* <u>Within 6 seconds</u>, turn MULTI JOG to designate the timer-on time, then press ENTER or II.**
Turning **MULTI JOG** changes both the hour and the minute. ◄◄ or ►► is also available instead of **MULTI JOG**. Holding these buttons down will vary the time rapidly.



***4* <u>Within 4 seconds</u>, turn MULTI JOG to select the duration for the timer-activated period.**
The duration can be set between 5 and 240 minutes in 5-minute steps.
◄◄ or ►► is also available instead of **MULTI JOG**.

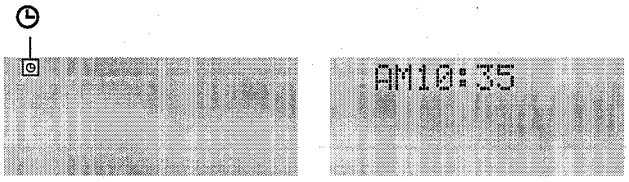


The duration will be automatically set after 4 seconds. It will also be set if **ENTER** or **II** is pressed within 4 seconds after step 4.

***5* Adjust the volume.**
The source sound will play at the volume level set in this step when the power is turned on by the timer.
If the volume level is set to 21 or higher, however, it will automatically be re-set to 20 when the power is turned on.

***6* Prepare the source.**
To listen to a CD, load the disc to be played first on tray 1.
To listen to a tape, insert the tape into the cassette tray.
To listen to the radio, select the band and tune in to a station.

***7* Press POWER to turn off the power.**
◷ remains on the display after the power is turned off (timer standby mode) if the power-economizing mode is OFF.



When the timer-on time is reached, the unit turns on and begins play with the selected source.

To check the timer setting
Press **TIMER**.
The selected source, the timer-on time, and the duration for the timer-activated period will be displayed for 6 seconds.

To change any of the previous settings
Carry out from step 1.
However, if you do not change the timer-on time, in step 3 just press **ENTER** twice and continue from step 4.

To cancel the timer standby mode temporarily
Press **TIMER** repeatedly until ◷ disappears and "OFF" is displayed.
To restore the timer standby mode, press **TIMER** once or twice to display ◷ or REC◷.

Using the unit while the timer is set
You can use the unit normally after setting the timer.
Before turning off the power, carry out step 5 and 6.

NOTE

- You can change the source that was selected in step 1 by pressing one of the function buttons before pressing **ENTER** or **II** in step 3.
- If the power-economizing mode is ON, ◷ is not displayed in the timer standby mode.
- Timer playback and timer recording will not begin unless the power is turned off.
- Connected equipment cannot be turned on and off by the built-in timer of this unit. Use an external timer.

TIMER RECORDING

Timer recording is applicable for TUNER, VIDEO1/2/3 and AUX/PHONO/5.1CH (with an external timer) sources only.

Press either **TUNER/BAND**, **VIDEO1/2/3** or **AUX/PHONO/5.1CH** to select a source, then **press TIMER repeatedly until REC◷ appears on the display**. Within 6 seconds, carry out the steps of "SETTING THE TIMER" from step 3 and load the tape to be recorded on into the cassette tray after step 6.

NOTE

- If the timer recording is done with the economizing mode (page 10) set to "ECO ON" or "ECO AUTO" and the power turns off, the dimmer mode will be set to "DIMMER 3" and the volume level will be 0 (minimum) level) the next time the power is turned on.
- You cannot use the timer function to record from a CD.
- You can check the timer setting by pressing **TIMER** even while the power is off. In this case, if you press **ENTER** or **II** within 4 seconds after pressing **TIMER**, you can enter the timer setting mode and change the previous setting.

CARE AND MAINTENANCE

Occasional care and maintenance of the unit and the software are needed to optimize the performance of your unit.

To clean the cabinet

Use a soft dry cloth.
If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution. Do not use strong solvents, such as alcohol, benzine or thinner as these could damage the finish of the unit.

To clean the tape heads

When the tape heads are dirty;
- high frequency sound is not emitted
- the sound is not adequately high
- the sound is off-balance
- the tape cannot be erased
- the tape cannot be recorded on

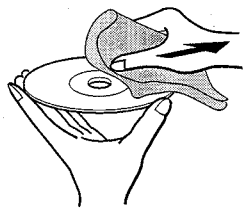
After every 10 hours of use, clean the tape heads with a head cleaning cassette.
Refer to the instructions of the cleaning cassette for details.

To demagnetize the tape heads

The tape heads may become magnetized after long-term use. This may narrow the output range of recorded tapes and increase noise.
After every 20 to 30 hours of use, demagnetize the tape heads with a separately sold demagnetizing cassette.
Refer to the instructions of the demagnetizing cassette for details.

Care of discs

- When a disc becomes dirty, wipe the disc from the centre out with a cleaning cloth.



- After playing a disc, store the disc in its case. Do not leave the disc in places that are hot or humid.

Care of tapes

- Store tapes in their cases after use.
- Do not leave tapes near magnets, motors, television sets, or any source of magnetism. This will downgrade the sound quality and cause noise.
- Do not expose tapes to direct sunlight, or leave them in a car parked in direct sunlight.

SPECIFICATIONS

Main unit CX-A1000

FM tuner section

Tuning range 87.5 MHz to 108 MHz
Usable sensitivity (IHF)
16.8 dBf
Antenna jacks 75 ohms (unbalanced)

MW tuner section

Tuning range 531 kHz to 1602 kHz (9 kHz step)
530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity 350 µV/m
Antenna Loop antenna

LW tuner section

Tuning range 144 kHz to 290 kHz
Usable sensitivity 1400 µV/m
Antenna Loop antenna

Amplifier section

Mid-high frequency amplifier

Power output Front
Rated: 80 W + 80 W (8 ohms, T.H.D. 1 %, 200 Hz-20kHz)
Reference: 100 W + 100 W (8 ohms, T.H.D. 10 %, 200 Hz-20kHz)
Rear (Surround)
Rated: 80 W + 80 W (8 ohms, T.H.D. 1 %, 1 kHz)
Reference: 100 W + 100 W (8 ohms, T.H.D. 10 %, 1 kHz)
Centre
Rated: 80 W (8 ohms, T.H.D.1%, 1kHz)
Reference: 100 W (8 ohms, T.H.D.10%, 1kHz)

Total harmonic distortion
0.15 % (40 W, 1 kHz, 8 ohms, DIN AUDIO/ Front)

LOW FREQ + SUB WOOFER amplifier

Power output Rated: 200 W + 200 W (6 ohms, T.H.D. 1 %, 100 Hz)
Reference: 250 W + 250 W (6 ohms, T.H.D. 10 %, 100 Hz)

Total harmonic distortion
0.15 % (100 W, 100 Hz, 6 ohms, DIN AUDIO/Front)

Inputs AUX: 310 mV
PHONO: 400 mV
VIDEO1, VIDEO2, VIDEO3: 310mV
5.1CH INPUT (adjustable)
FRONT: 300 mV
SURROUND: 300 mV
CENTER: 600 mV
SUB WOOFER: 300 mV
MIC 1, MIC 2: 1.4 mV (20 kohms)

Outputs CD DIGITAL OUT (OPTICAL)
SPEAKERS:
LOW + SUB WOOFER 6 ohms
HIGH 8 ohms
SURROUND SPEAKERS: accept speakers of 8 -16 ohms
CENTER SPEAKER: accepts speakers of 8 ohms or more
PHONES (stereo jack): accepts headphones of 32 ohms or more

Cassette deck section

Track format 4 tracks, 2 channels stereo
Frequency response CrO_2 tape: 50 Hz – 16000 Hz
Normal tape: 50 Hz – 15000 Hz
Signal-to-noise ratio 60 dB (Dolby B NR ON, CrO_2 tape peak level, above 400 Hz)
Recording system AC bias
Heads Recording/playback head × 1, erase head × 1

Compact disc player section

Laser Semiconductor laser (λ = 780 nm)
D/A converter 1 bit dual
Signal-to-noise ratio 85 dB (1 kHz, 0 dB)
Harmonic distortion 0.03 % (1 kHz, 0 dB)

General

Power requirements 230 V AC, 50 Hz
Power consumption 380 W
Dimensions (W × H × D)
360 × 372 × 423 mm
Weight 18.5 kg

Front speakers SX-WA1000

Cabinet type 4 way, built-in subwoofer
Speakers Subwoofer:
220 mm cone type
Woofer:
160mm cone type
Tweeter:
60 mm cone type
Super tweeter:
20 mm ceramic type
Impedance 6 ohms/8 ohms
Output sound pressure level
89 dB/W/m
Dimensions (W × H × D)
250 × 592 × 300 mm
Weight 11.7 kg

Surround speakers SX-R1800

Speakers Full-range:
100 mm × 1, cone type
Impedance 8 ohms
Dimensions (W × H × D)
120 × 230 × 175 mm
Weight 1.9 kg

Centre speaker SX-C1800

Speakers Full-range:
100 mm × 2, cone type
Impedance 8 ohms
Dimensions (W × H × D)
430 × 120 × 175 mm
Weight 2.7 kg

Specifications and external appearance are subject to change without notice.

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Please check the laws on copyright relating to recordings from discs, radio or external tape for the country in which the machine is being used.

BBE SYSTEM

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DOLBY NR

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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DOLBY PRO LOGIC

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To reset

If an unusual condition occurs in the display window or the cassette decks, reset the unit as follows.

1 Press **POWER** to turn off the power.
2 Press **POWER** to turn the power back on while pressing **■CLEAR**. Everything stored in memory after purchase is canceled.

If the power cannot be turned off in step 1 because of a malfunction, reset by disconnecting the AC cord, and connect it again. Then carry out step 2.

TROUBLESHOOTING GUIDE

If the unit fails to perform as described in these Operating Instructions, check the following guide.

GENERAL

There is no sound.
- Is the AC cord connected properly?
- Is there a bad connection? (→ page 4)
- There may be a short circuit in the speaker jacks.
  → Disconnect the AC cord, then correct the speaker connections.(→ page 4, 5)
- Was an incorrect function button pressed?
- No sound is heard from the centre and surround speakers when the DOLBY PRO LOGIC, the DSP SURROUND system and the 5.1CH are set to off. (→ pages 13, 26)

There is no sound from the centre and surround speakers when you use the DOLBY PRO LOGIC.
- Are the DSP SURROUND system and the 5.1CH set to off? (→ pages 13, 26)

Sound is emitted from one speaker only.
- Is the other speaker disconnected?

The output sound is not stereo.
- Is the Karaoke function turned on? (→ page 29)

An erroneous display or a malfunction occurs.
→ Reset the unit as stated in the left.

The unit blacks out when the power is off.
- Is the power economizing mode set to "ECO ON" or "ECO AUTO"? (→ page 10)

The power is not turned on.
- Disconnect the AC cord, and connect it again in a few seconds.

TUNER SECTION

There is constant, wave-like static.
- Is the antenna connected properly? (→ page 4, 5)
- Is the signal weak?
  → Connect an outdoor antenna.

The reception contains noise interferences or the sound is distorted.
- Is the system picking up external noise or multipath distortion?
  → Change the orientation of the antenna.
  → Move the unit away from other electrical appliances.

CASSETTE DECK SECTION

The tape does not run.
- Is the deck in pause mode? (→ page 18)

The sound is off-balance or not adequately high.
- Is the playback head dirty? (→ page 33)

Recording is not possible.
- Is the erasure prevention tab on the tape broken off? (→ page 25)
- Is the recording head dirty? (→ page 33)

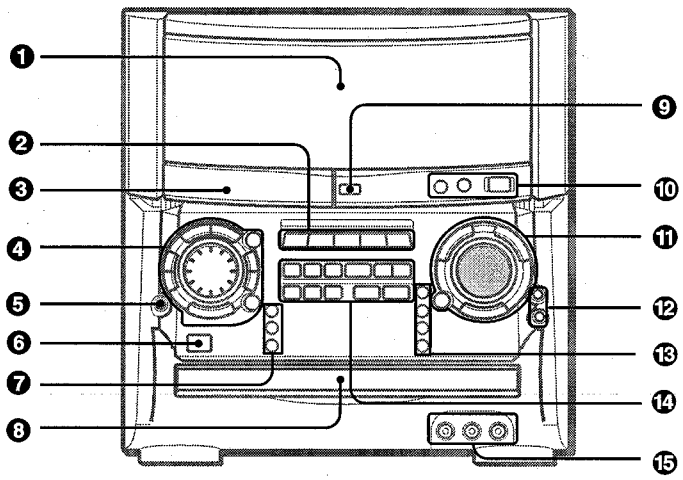
Erasure is not possible.
- Is the erasure head dirty? (→ page 33)
- Is a metal tape being used?

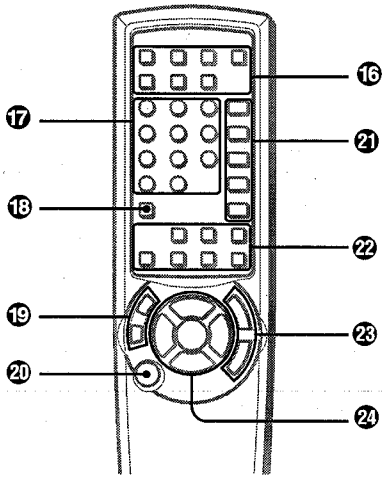
High frequency sound is not emitted.
- Is a tape recorded without Dolby NR played back with the Dolby NR system operating? (→ page 18)
- Is the playback head dirty? (→ page 33)

CD PLAYER SECTION

The CD player does not play.
- Is the disc correctly placed? (→ page 19)
- Is the disc dirty? (→ page 33)
- Is the lens affected by condensation?
  → Wait approximately one hour and try again.

PARTS INDEX





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